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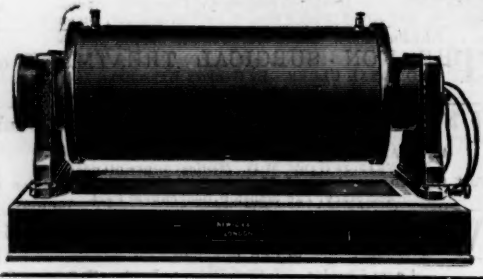

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The Oliver-Sharpey Lectures
ON
HEART FAILURE.

Delivered before the Royal College of Physicians of London on April 4th and 6th, 1911,

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LECTURE I.

AN ANALYSIS OF THE PRESENT DAY CONCEPTION OF HEART FAILURE.

MR. PRESIDENT AND GENTLEMEN,—I thank you for the honour you have conferred upon me in inviting me to give these lectures. In seeking for a suitable subject I considered the type of lecture usually given before you, and I found that most of your lectures deal with observations made in laboratories or drawn from hospital experiences, and rarely, if ever, deal with practical observations derived from general practice. It is now many years since it was forced upon me that the study of disease and its treatment would never be satisfactorily accomplished until the general practitioner took his share in the work of research. Hitherto his position in the rank of investigators has not been appreciated, and if he has had no actual discouragement his attempts have been too often received with a chilling indifference. The need for his help will be realised if we but reflect upon our imperfect knowledge of the course of many chronic diseases, where neither the inception nor the different phases of the progress are understood. Usual exponents of medical science are not brought into intimate contact with the varying manifestations of disease. The trivial ailments by which the beginnings of diseases are often made manifest are lost to them. The subtle changes that go on as the disease advances are usually missed, and links between the various stages are too often based on inference alone. When such a process takes the place of observation in the study of disease it may be taken for granted that the result will be entirely unsatisfactory. On the other hand, the general practitioner has the opportunity of seeing all the changes as they proceed, and the behaviour of the individual under all sorts of conditions. Were he helped and encouraged his assistance would be found invaluable. But it needs a patience and a perseverance that are called for in no other line of investigation, for he may have to watch individuals for decades for the solution of a problem.

I have therefore chosen my subject with the twofold object of demonstrating, firstly, the need for observation, such as the general practitioner alone can undertake; and secondly, the results that have been obtained by such a line of observation. I feel, however, that an apology is needed for the imperfection of the observations I propose to place before you. When I began these observations it was not with any expectation that they would yield results of much value, and it was only as time went on that the importance of the investigations dawned upon me. Imperfect as they are, I am not without hope that they may throw some light on disease processes, and justify the views I have expressed as to the line of observations I have mentioned.

If an attempt be made to obtain some definite conception of the present-day aspect of heart failure, and the significance of symptoms, no account of sufficient precision is to be obtained from the study of any textbook. The subject is of much importance, and touches the members of the profession so closely and at so many points, that it is a matter for marvel that writers have not realised the necessity for formulating their ideas in language that the student or reader can appreciate. The reason for this absence of definition is probably because most writers have not had the opportunity of watching the development of disease in individual cases for long periods of time. They have devoted themselves mainly to describing the details of the numerous features by which the circulatory system is made manifest to us. As these features vary in character, those that most impress the observer's senses have been elevated above their fellows and an undue significance attached to them. For this reason phenomena that appeal to the sense of hearing are considered to be the chief manifestations of disease, and we find that the majority of diseases of the heart are described according to the auscultatory phenomena associated with them. In thus accentuating the importance of limited lesions, the appreciation of the heart's action as a whole has been lost sight of, with the result that the real significance of symptoms has never been fully appreciated, while the study of heart affections from the point of view of isolated disease has actually led to a misinterpretation of the meaning of many of the most obvious phenomena. It seemed, therefore, not inappropriate that I should take the opportunity of presenting to you a view of heart failure which I have employed for many years, and which in the vast majority of cases has given me a satisfactory basis on which to determine the value of phenomena, even when I had a very imperfect notion of the manner of their production.

Before elaborating the manner in which I seek to estimate the degree of heart failure and the significance of symptoms I think it necessary to demonstrate the need for such a procedure, following in this respect the method of theologians, who teach that before a sinner is fit for repentance he must be brought to an appreciation of his own shortcomings.

THE POPULAR CONCEPTION OF HEART FAILURE.

Let us consider how the average medical practitioner acquires his ideas of heart failure. A young fellow has passed all his examinations and may have had some hospital experience as a house physician. He passes into general practice and is surprised to find that diseases present very different aspects from what he expected. During his hospital experience he has seen many patients seriously ill from heart failure. In some murmurs have been detected, and the valve lesions have been regarded as the cause of the heart failure. The patients have died and the diagnoses have been verified, for the suspected valves have been found thick and shrunken, and the cause of death has been duly certified as disease of the valves. The manner in which heart failure had been brought about has been explained to him—the systolic murmur indicated incompetence of the mitral valve, the leak from the left ventricle had distended and embarrassed the left auricle, stasis in the lungs, with subsequent embarrassment of the right ventricle had been produced, and this again had been followed by dilatation of the right ventricle, with consequent tricuspid regurgitation, irregularity of the heart's action, embarrassment and dilatation of the right auricle, back pressure into the veins, followed by dropsy and enlargement of the liver. This view presented such a simple and intelligible explanation that he never dreamt of calling it into question.

With this belief in the mechanical production of heart failure we can readily understand how the practitioner came to estimate the significance of a mitral systolic murmur. The heart failure is sometimes divided into stages, more or less corresponding to certain evidences, which are taken to indicate stages in the gradual process of heart failure by backward pressure. Consequently any given case is placed in a definite stage, according to the presence or absence of certain phenomena. Even a person who is in perfect health when a murmur is detected is looked upon as being in the first stage, with what is called "good compensation." That is to say, the individual is considered to have a valve defect, and that defect indicates disease, or at least impairment of the functional activity of the heart, and it is but a matter of time when the heart will no longer be able to maintain the circulation and heart failure is bound to follow. He has also been taught that a heart to be normal must be regular in its action, so that every form of irregularity is looked upon as evidence of disease. As time goes on he finds murmurs and irregularities at all ages—in the young, in the middle-aged, and in the old. He detects them in people in the enjoyment of good health. He frightens many with his evil prognostications, he forbids the young to play games, he rejects people for life insurance. As years pass on, for one case where his prognosis has come true there are dozens who have falsified it. He seeks more light, and turns to the writings of authorities. He wants to know the significance of irregularities. His own ideas are confused, and the numerous authorities but add to

his bewilderment. Many carefully avoid all reference to the subject, others speak with mingled courage and fear—irregularities may be of little significance, but, on the other hand, they may be grave—in certain cases they are of no importance, in others they are of serious importance. But how to distinguish the serious from the harmless he can find no answer. It is the same in regard to murmurs. His experience has shown that many individuals in whom he detects murmurs do not suffer from heart failure. Again, authorities are silent on the differentiation of the serious from the harmless, and although most writers recognise that there are differences of significance, yet practically all agree that murmurs are evidence of impairment, if not disease, and no clear definition can be gleaned of their real significance.

The views I have put forth represent broadly the manner in which heart failure is viewed by the practitioner, and when we come to the higher authorities we get little further satisfaction. It is a matter of everyday experience to find cases judged and treated because of some supposed abnormality as a murmur, an irregularity or an increase in the size of the heart. I fully acknowledge that many physicians do recognise differences in the significance, and do give valuable and trustworthy opinions. But when we inquire upon what grounds this differentiation is based they fail to produce evidence sufficiently tangible for practical use, and I do not think I am overstating the case if I assert that to-day many leading authorities would admit that a murmur or an irregularity or an increase in the size of the heart, singly or altogether, implies impairment if not disease.

ORIGIN OF THE PRESENT-DAY CONCEPTION OF HEART FAILURE.

In order that the profession may appreciate the position held in regard to heart failure and the significance of such symptoms as murmurs or irregularities, it will be profitable to inquire into the origin of some of our most cherished beliefs. If we would really seek to find the true reason for many accepted beliefs, we must first consider those who propound them. For that purpose it is necessary to consider the mental attributes of the physician himself. It is a characteristic of the human mind, seen in primitive man, in the child, and in the scientist, to attribute to malign influences phenomena which are obscure in origin and which are assumed to be unnatural.

Our profession is not immune from this trait of seeing evil in the unknown. It is the cause of many gloomy forecasts. The real nature of heart failure not being understood, and experience showing that death occurs unexpectedly, signs or symptoms which are considered abnormal, and whose nature is not known, are viewed with suspicion or as portents of evil. So general is this tendency to imagine evil in the unknown that I am continually seeing members of our profession who are apprehensive because in themselves or their patients some supposed abnormality has been observed in the heart's action. I also see a large number of people, who are handicapped in their life's work, subjected to long periods of treatment, and made readily apprehensive because of this tendency to see evil in that which is not understood.

To obtain a just appreciation of the significance of any symptom it is simply necessary to seek out its cause and bearing on the heart's efficiency. Before we proceed to inquire as to the significance of such symptoms as murmurs and irregularities, it will be instructive in the first instance to see on what grounds they were assumed to be evidence of cardiac infirmity. Practically in all the present day-teaching their significance is taken for granted. If it be borne in mind that murmurs were practically not recognised till the days of Laennec, we shall find how this mystery of sound has affected the whole profession. In Laennec's time murmurs were looked upon as evidence of heart disease. It will be observed that this view was taught and accepted at a time when the cause of murmurs was not understood, and before any physician had observed individuals for a sufficient length of time to acquire the knowledge of what happened. That is to say, before even the most elementary facts were appreciated, a definite decision was accepted, with the result that the views so hastily acquired remain the accepted beliefs of this day. No doubt, support of this view was supposed to be found in the fact that patients died from heart failure who had had murmurs during life. Later on the identification of specific murmurs with certain diseased valves was supposed to establish this view. The profession, influenced by this very limited experience, has been so impressed with the association of murmurs and heart failure and diseased valves, that the great majority of heart diseases are distinguished by the noise that the heart makes, although these noises may have little or no connexion with the heart failure.

THE SIGNIFICANCE OF MURMURS.

I repeat that I am well aware that many physicians do distinguish between murmurs that are functional and organic, and that some regard the former as of little significance. But I want to direct attention to the fact that the outcome of all these attempts to appreciate the nature of murmurs has been to impress the majority of the profession with the idea that murmurs are evidences of an impaired heart, and so strong is the hold that this view has upon the profession that many physicians reject all candidates for appointments or life insurance in whom a murmur is present, and army medical officers unhesitatingly reject all candidates who show a murmur or an irregularity. If you inquire from the latter the reason for this rejection, you will be told that many soldiers break down from valvular disease and irregular hearts. But I may point out that this is not proof, inasmuch as those who have murmurs or irregularities are not admitted into the army, and that those who do break down have never previously been shown to have had these symptoms.

Considering how widespread is the belief among many members of the profession that functional murmurs may lead to heart failure, it would have been expected that numerous instances would have been published. Strange as it may seem, there is not in all the literature which I have searched the record of a single instance where people with these so-called functional murmurs have suffered from heart failure. What we do come across occasionally is an isolated reference to a case concerning which the writer expresses surprise that an individual in whom a murmur has been detected had falsified entirely the prognosis of the physician.

That this view of the seriousness of functional murmurs should be strongly held will be understood when the teaching of some of our greatest clinicians is considered. In my opinion, one of the best books on diseases of the heart is that of Balfour, and all who knew him admit that he was pre-eminent as a clinician and a man of wide and broad views. This is what he says: "The early recognition of those so-called functional murmurs, coupled with the more accurate knowledge we now have as to their causation, will doubtless in the future be the means of enabling us to avert the drifting into incurable disease of many of these cases, and to restore usefulness to many youthful lives, which would otherwise have been doomed to sad despair." After this expression we would naturally expect him to give us some account of patients who were doomed to sad despair, and yet the only account of a functional murmur of the kind which I find in his book is the following: "Many years ago I vainly endeavoured to procure the contraction of a flabby, dilated, and chlorotic heart; in time, and with my sanction, she was happily married, and is now the mother of several healthy children. Her heart has given her no trouble, and though a systolic murmur was long present, of late years this has become less obvious, and is now only to be occasionally heard faintly." In this short account we can gather the unnecessary alarm which was occasioned by the murmur. The statement that the heart was flabby has no definite significance and is not capable of proof, and so far as it implied inefficiency of the heart muscle in this case it is inaccurate. The fact that the patient passed scathless through several pregnancies indicates a perfectly healthy and sound heart muscle.

Seeing that murmurs were considered to be evidences of disease before even the nature of their causation was understood, it is surely time that we sought to estimate them at their real value.

ARE MURMURS NECESSARILY A SIGN OF IMPAIRMENT?

What ground is there for supposing that a perfectly normal heart should of necessity be free from murmurs? I have put such a question to many of my colleagues, and the mere suggestion of such an idea has seemed absolutely uncalled for. It is an article of belief so deeply and firmly embedded as to be beyond the province of dispute, but as a matter of fact it is based on the assumption that the function of the valves is only

to close the orifices. And yet there are no grounds to justify the belief, beyond the fact that certain valvular conditions are associated with conditions that lead to heart failure. But surely it is not logical to reason that, because some valve murmurs indicate defects, all valve murmurs are therefore signs of defects. The assumption has been made and taken for granted without sufficient evidence. That these orifices and valves have other functions has not yet entered into the imagination of most physicians. If we consider the function of a healthy heart we shall realise that a murmur may be quite consistent with perfect health. Let us take into consideration the mechanism of the tricuspid valve for instance. John Hunter described the tricuspid valve as being barely sufficient to close the tricuspid orifice, and the experiments and clinical observations of King and Gibson have shown how easy it is to induce tricuspid regurgitation. A well-acting heart possesses the power of altering the size of its chambers in accordance with the calls made in its work, apart altogether from its systole and diastole. This is due to the muscular walls possessing the function of tonicity, a function which enables the heart to alter the size of its chambers in order to accommodate itself to the exigencies of life. When we consider the extremely varied amount of effort which the heart is called upon to expend, it will be easy to understand that a physiological dilatation may often be called into operation. If, then, the tricuspid valves are barely competent, it is readily understood that a slight degree of physiological dilatation will render them incompetent.

THE FUNCTIONS OF THE AURICLES.

Moreover, if we consider the functions of the auricles, we shall find out that they are specially constructed to meet this incompetence. The older physiologists were wont to describe the main function of the auricles as being that of reservoirs, capable of varying their contents to meet the varying circumstances of cardiac activity. This is probably their most important function, for in many cases the work of the heart can be carried on efficiently when the auricles cease to act as contracting chambers; as, for instance, in certain cases of auricular fibrillation, to which I shall allude later.

THE FUNCTION OF TRICUSPID INCOMPETENCE.

Wilkinson King has shown that this tricuspid incompetence, with the reservoir function of the auricles and great veins, and even of the liver, is a special provision in diving animals, and he described the modified condition in man as the "safety valve function" of the tricuspid valve. What is the common notion of tricuspid regurgitation? In many textbooks it is looked upon as the beginning of the end. When tricuspid regurgitation sets in the heart is supposed to have entered on a critical phase of exhaustion. This view is simply the outcome of the back pressure conception of heart failure. Many writers recognise the normal incompetence of the tricuspid valve, but the vast majority of writers do not appreciate the simple mechanism of its production in healthy hearts.

THE HARMLESSNESS OF MITRAL INCOMPETENCE.

What I have said of tricuspid incompetence applies also to mitral incompetence. The mechanism by which a functional murmur arises is probably the same. But in the case of the mitral valve we get better evidence of the harmlessness of mitral regurgitation from the study of cases with organic changes in the valves, for, as I shall show later, mitral regurgitation due to damaged valves can go on for 50 years with absolutely no crippling of the heart in its work.

ARE IRREGULARITIES NECESSARILY A SIGN OF IMPAIRMENT?

The same form of inquiry reveals that the significance of irregular action of the heart is misunderstood. On what grounds is it assumed that a heart, to be normal, must be regular in its action? A historical retrospect will throw little light upon the subject, for from the dim pages of history obscure references to irregular heart action show that it has been regarded as abnormal long before any true idea was acquired of the real cause of its production, and long before it was shown that irregularities were of different kinds and had widely divergent significance.

Let us consider the irregularity so common in the young, where its presence is often looked upon as a sign of disease or of impairment. We know that the heart is remarkably sensitive to nerve influences. In certain individuals the respiratory movements, by stimulating the vagus nerve, produce a transient slowing of the pulse, and this may be so marked that a recognisable form of irregularity may arise from this cause alone. This irregularity occurs most markedly in the young, and mainly, if not entirely, in those with a perfectly healthy heart muscle. Any cause that irritates or excites the heart muscle, as fever, excitement, or effort, at once abolishes the irregularity. So marked are these causes in abolishing the irregularity that I have for some years looked upon the presence of the irregularity as a possible evidence of the integrity of the heart muscle, and so far from considering it an evidence of disease or of infirmity, it may, within certain limits, be considered a positive evidence of a healthy heart.

THE REAL TEST OF THE SIGNIFICANCE OF MURMURS AND IRREGULARITIES.

Although it might be objected that this way of looking upon certain murmurs and irregularities as within normal and physiological limits is purely conjectural, I do not base my argument solely on such grounds. The real test of this reasoning is the practical one of close observation of individuals, who have shown these murmurs and irregularities for many years, during which they have been exposed to all the exigencies of a strenuous life. This test I have applied in so many cases and watched individuals for so many years that I have no hesitation in saying that the irregularity and murmurs found so frequently in the young are evidence neither of disease nor of infirmity, but are normal phenomena, and in many cases are positive evidences of a healthy heart. I know very well that many physicians recognise the harmlessness of irregularities and murmurs and are quite prepared to admit the position I have taken up when the matter is the subject of an academical discussion. I have, however, found from practical experience that these phenomena are taken, to all intents and purposes, as abnormal signs when any particular individual presents them. Thus, for instance, a youth at school or college is examined by a physician, and when these phenomena are present the symptoms are looked upon as signs of weakness, if not disease, and treatment is at once directed to their cure, and the youth is forbidden to indulge in those games and pastimes which call for strenuous exertion. I watched with particular interest individuals with these functional murmurs and irregularities and have never seen one suffer from heart failure, but what is more significant I have never seen in the 28 years I spent in general practice a single case of heart failure from a functional affection of the kind with which I am dealing. I may point out that my experience has been a very extensive one, and that people whom I have observed have led hard and strenuous lives, so that the conditions of life would aggravate any defect that tended to heart failure.

THE HARMLESSNESS OF ORGANIC MURMURS.

So far I have been dealing with what are described as functional murmurs, and many physicians recognise that these are of less significance than murmurs due to an actual lesion of the valves, and teachers usually describe certain evidences which distinguish an organic from a functional murmur. In order to appreciate better the significance of murmurs I can cite from my experience cases with mitral disease whom I have watched for 20–30 years and who have never shown the slightest sign of heart failure. From this it will be seen how unjustified is the view that mitral regurgitation is of necessity a serious trouble. The view that the auricles are adaptable reservoirs is supported by such evidence as that of a heart unimpaired by mitral regurgitation which has been going on for 50 years. Take, for instance, cases with a history of rheumatic fever, after which a rough systolic mitral murmur was left, which from its character and history and propagation leaves no doubt as to its being the result of an endocarditis acquired during the attack of rheumatic fever. What is the significance of this murmur? We may take it for granted that an individual with such a murmur would be rejected for life insurance or made to pay an enhanced premium, while for all occupations as the army or navy he would be unhesitatingly rejected. Yet I have observed such patients pass into middle life and old age, some of them leading strenuous lives, who have never shown the slightest sign of heart failure.

THE HARMLESSNESS OF ORGANIC IRREGULARITIES.

Irregular action of the heart is in the same unsatisfactory position. Though irregularity in the human heart is a phenomenon of the greatest frequency from youth to old age, few writers attempt to deal with the subject in such a manner as to enable the reader to understand their position. They either ignore the subject—and you may find textbooks of considerable size where the subject receives at the most only incidental references—or they deal with the subject in such an indefinite manner that no clear idea of their position can be ascertained. On the other hand, when we come into everyday dealings with the subject, we find that irregular action of the heart is looked upon by our profession as an evidence of serious heart impairment. From middle age onwards, sometimes before, there appears in most people an irregular action of the heart of a very characteristic form. This is due to the auricle or ventricle contracting prematurely. The contractions are often so small as not to be perceptible in the pulse, which is then spoken of as being intermittent. As a matter of fact, after watching individuals for long periods of years I can say that the great majority of those people are in no danger, the irregularity is of no grave significance, and treatment is unnecessary. In certain grave conditions its presence may be one of several symptoms, and in such instances it is difficult to tell whether the condition producing it is related to the cause of the heart failure, and in such cases the physician must base his opinion on a study of all the symptoms. There are certain irregularities which are evidences of grave disease, but there are other signs by which we can appreciate the gravity of the case.

THE BACK PRESSURE THEORY OF HEART FAILURE.

I have already referred to the notion that heart failure with valvular incompetence is due to the gradual increase of pressure in the lungs and in the chambers behind the incompetent valves. Practically the whole conception of the significance of regurgitant murmurs has been based on this conception of back pressure. In order to get a clear idea of the unsatisfactory basis on which the present-day conception of heart failure rests it is necessary to look a little more closely into this accepted doctrine. I have failed in my endeavours to trace the origin of this notion, but have come across it evidently in full acceptation in Bellingham's Diseases of the Heart, published in 1857. At the period when it was accepted the meaning of the signs on which it was based was imperfectly understood. Like all theories based upon the application of mechanical laws to vital phenomena, there is some truth in it, but like all such theories it leaves out of consideration so many factors as to render it in the main untrue. Considering the assurance with which this view is taught, it might be assumed that abundant evidence was forthcoming for its support. We do indeed get many realistic diagrams, illustrating imaginary changes in the circulation, but there is a sad lack of trustworthy detail. I may say that I have failed to find in literature the record of a single case giving evidence sufficient to justify this explanation. Moreover, I have seen cases with their first attack of endocarditis, I have patiently followed their subsequent progress, and have seen heart failure and death ensue, but never in my experience have I seen one case which followed the course supposed to be characteristic of heart failure from back pressure. Although back pressure may be present and may modify the symptoms of the heart failure the back pressure is never the essential cause of the heart failure.

THE ESSENTIAL CAUSES OF HEART FAILURE.

When we watch cases with heart lesions, associated with mitral disease, which ultimately lead to heart failure, we shall find symptoms arise which, if properly appreciated, give us a clue to the essential cause of heart failure. We may find, for instance, the character of the murmur changing and the appearance of new murmurs as the years go on. This indicates that the lesion producing the murmur is not stationary, and that there are slow insidious changes going on in the heart. Now these changes are never limited to the endocardium or the valves, but invariably involve the heart muscle. When it is borne in mind that the whole efficiency of the circulation depends upon the integrity of the heart muscle it will be seen how important it is to appreciate these myocardial changes. I shall in my next lecture point out that the essential cause of heart failure is due to the changes in the heart muscle, which by impairing its contractile force render it unable to maintain its circulation. The valve defect which is revealed by the murmur is, as a rule, a mere embarrassment to the heart in its work. Moreover, there are many fatal forms of heart failure in which the valves are perfectly competent to the end. It must further be understood that the coincident changes in the muscle which lead to heart failure are not limited to one chamber, but may affect all the chambers of the heart.

Not only does this view of back pressure overlook the real source of the heart's inefficiency, but it has misinterpreted the most significant change in the heart's action, a change which induces or precipitates those signs of heart failure, which are looked upon as characteristic of back pressure. It is frequently recognised that accompanying such signs of heart failure, as dropsy or orthopnœa, the rhythm of the heart has become irregular. This symptom is worked into the back-pressure theory as being due to the distension of the auricles. As a matter of fact, the onset of the irregularity precedes the heart failure in a large proportion of cases, and is itself a sign of a change which has taken place in the heart's action which at once embarrasses the heart in its work and leads directly to extreme heart failure. This change is due to the auricles passing into a state of fibrillation, a condition which alters the whole aspect of the mechanism of heart failure.

AURICULAR FIBRILLATION.

In order to obtain a better view of extreme heart failure, and in order to call attention to probably the greatest discovery of practical importance that has yet been made in the domain of the clinical pathology of the heart, I will briefly describe some of the features of the condition, which we now recognise to be due to fibrillation of the auricle. I think it all the more necessary to deal with this matter because, even yet, many observers who detect the cause of the altered rhythm of the heart are not aware of its immense importance. The recognition of this condition and the phenomena accompanying its onset presents the subject of the most common form of heart failure in an entirely new light, and affords grounds on which a sound prognosis and a rational therapy can be based in many obscure cases. The response of hearts affected with auricular fibrillation to remedies differs so much from the response of hearts with the normal rhythm, that its recognition throws a light upon the action of cardiac remedies which modifies the whole conception of cardiac therapy.

DEFINITION OF AURICULAR FIBRILLATION.

Within the last few years the attention of those engaged in the study of the heart's action has been directed to a condition of which little has hitherto been known. Physiologists have long recognised that under certain obscure circumstances the muscular fibres of the heart muscle, in place of contracting in a normal and orderly fashion, could be put into a state where the individual fibres or small bundles of fibres contract rapidly and apparently independently of each other, so that the chambers cease to contract as a whole, but stand still, while all their fibres are in incessant movement. The result of these fibrillary contractions is at once to suspend the contractile function of the chambers affected. When the ventricles pass into a state of fibrillation death ensues, and MacWilliam suggests that this is in all probability the cause of sudden death in the human subject. When the auricles pass into fibrillation death does not ensue, for the fibrillation cannot pass along the bundle which connects auricle with ventricle. But what does happen is that the stimuli for contraction are rapidly and irregularly thrown upon the bundle by the fibrillating auricles, and if the bundle is able to transmit the stimuli and the ventricles able to receive them the ventricles are stimulated in a rapid and irregular manner. In some cases we find the onset of auricular fibrillation accompanied by a rapid and irregular pulse, in others by one of moderate rate or even slower than the normal, but almost invariably irregular. This variation in rate depends upon the susceptibility of the auriculo-ventricular bundle or of the ventricle to stimuli, a point of the greatest importance when treatment has to be considered.

PATHOLOGICAL CHANGES INDUCING OR ASSOCIATED WITH AURICULAR FIBRILLATION.

The cases in which fibrillation is most frequently found are those with a previous history of rheumatic fever, or in elderly people. The pathological changes found in the heart which seem to bear upon this question are an increase of fibrous tissue and of nucleated cells in the walls of the auricles. There are also in many cases calcareous changes in the arteries. Accompanying these changes in the auricle are similar and sometimes more extreme changes in the muscle walls of the ventricles, and it is very probable that the degrees of heart failure that follow the onset of auricular fibrillation are dependent on the extent of these changes in the ventricular muscle.

FREQUENCY OF THE OCCURRENCE OF AURICULAR FIBRILLATION.

This condition, as I have already remarked, is of great importance when we come to deal with cases of heart failure. I have observed nearly a thousand cases, and have watched a large number for years. About 70 per cent. of the cases of severe heart failure met with in general practice, with dyspnœa and dropsy, owe the onset of heart failure to this condition. There are, of course, underlying conditions of the heart muscle which lead up to it, and so far as the future of the patient is concerned it depends upon the degree of impairment of the heart muscle. In addition to cases of severe heart failure, auricular fibrillation is frequently met with in people with heart failure of varying degree, in some with little or no impairment of the heart's efficiency, in others with long and persistent enfeeblement.

AURICULAR FIBRILLATION AND HEART FAILURE.

Although I was at a loss to account satisfactorily for the mode of production of the phenomena produced by what I now know as auricular fibrillation, I had recognised 20 years ago that the group of symptoms in these patients indicated a very definite condition, which I described first in my writings as "paralysis of the auricle" and later as "nodal rhythm." I had therefore little difficulty in recognising the condition when it arose. By keeping in touch with my patients I had observed cases when the fibrillation started and watched their progress. In many I found that the onset of heart failure was directly due to the fibrillation. Some of them have drifted and died, irresponsive to all treatment, within a few weeks or a few months. Others have responded to treatment and led useful lives for many years, while others have maintained but a crippled existence. Some, on the other hand, have been very little affected, and have led energetic lives with little or no treatment. In order to be able to give a reasonable opinion as to the prospects of these cases I have carefully observed the phenomena which distinguished those who fared badly from those who have been but little affected, and by this means I have obtained an estimation of the value of some of the phenomena and their bearing on heart failure, which I will describe in my next lecture.

AURICULAR FIBRILLATION AND THE BACK-PRESSURE THEORY.

It is necessary to recognise that auricular fibrillation is not the outcome of back pressure, inasmuch as I have seen it repeatedly in individuals in whom there were no signs of cardiac enfeeblement, even after its inception. In many cases its inception was at once followed by the first symptom of heart failure. Why this should happen will be understood when it is recognised that the four chambers of the heart are simultaneously thrown into an abnormal action. The auricles are standing still, so that the heart loses what benefit is obtained by the orderly contraction of these chambers. In the cases that do badly the ventricles are stimulated to rapid and irregular action. They are not filled in the normal fashion. The periods of rest between the beats are shortened and are of insufficient length to restore the strength of the heart muscle. The beats therefore are less effective, and with persistence of the rapid rate exhaustion of the heart muscle sets in, and gradually there supervene all the phenomena which we recognise as characteristic of extreme heart failure. This explanation dealing with a certain class is borne out in many ways, but I refer to it here in order to show that heart failure in these cases does not follow the route mapped out in the scheme of back pressure, but that all four chambers are at once rendered inefficient.

THE INADEQUACY OF THE BACK-PRESSURE THEORY TO EXPLAIN HEART FAILURE.

To sum up, the theory of heart failure from back pressure lays stress upon and magnifies factors of little importance, and ignores entirely the essential factors in the production of heart failure. The back-pressure theory leaves out of consideration the fact that the valve lesion may be a steadily progressive one, and it omits the still more important fact that there are coincident changes going on in the structure of the heart muscle, impairing its efficiency, and leading up to the essential cause of heart failure. But most important of all, this back-pressure theory has failed to recognise that the changes which have led directly to the production of heart failure and produced such symptoms as dyspnœa, dropsy, enlargement of the liver, are due to the sudden inception of a different rhythm in the heart's contraction by fibrillation of the auricle.

The main object I have had in this lecture was to show that the accepted view of heart failure has been based upon a misconception of the means by which it has been brought about, and that certain phenomena associated with heart failure had attributed to them, in consequence of this association, a significance which they do not possess. To obtain a just estimate of their significance, and a clear idea of what is really the essential nature of heart failure, is the subject to which I propose to devote myself in my next lecture.

A RECENT SERIES OF 200 CASES OF TOTAL ENUCLEATION OF THE PROSTATE.

BY P. J. FREYER, M.D., M.CH.,

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IN a lecture delivered by me at the Medical Graduates' College and Polyclinic on March 17th, 1909, and published in THE LANCET of May 1st of the same year, entitled "When to Operate for Enlarged Prostate," I reviewed 600 cases of my operation of total enucleation of the prostate for radical cure of enlargement of that organ. I have now completed a further series of 200 cases of this operation, the results of which I propose placing before the profession in the present paper, at the same time, by means of illustrative cases given in detail, directing attention to many interesting, important, and, indeed, remarkable, features connected with the operation.

CASE 621.—The patient, a gentleman, aged 77 years, was seen in consultation with Dr. A. Latham on May 10th, 1909. The usual prostatic symptoms had existed for 20 years. Catheter had been employed to empty the bladder since 1895, at first occasionally, then frequently; he had been entirely dependent thereon for the last six years; catheter now employed every four hours, its introduction being attended with difficulty, pain, and hæmorrhage. He had been twice sounded for stone with negative results by other surgeons. Very seriously ill from cystitis and resulting blood poisoning in 1900. I drew off 5 oz. of residual urine, which was cloudy but acid; specific gravity 1020; trace of albumin. The largest catheter that would pass was a coudé No. 6, and this had to be introduced 16 in. before the urine flowed. The prostate was felt per rectum to be enormous in size, bilobed, smooth, soft, symmetrical, and moveable, the usual characteristics of the adenomatously enlarged organ of old age. Bimanually it was felt to be the size of an infant's head.

On May 16th, 1909, Mr. C. Braine being anæsthetist and Mr. H. S. Pendlebury being present, I enucleated the prostate entire in its capsule. It was globular in shape, two-thirds of its bulk lying prominent in the bladder and merely covered by mucous membrane. The urethra was of the form of a deep vertical slit between the lobes, which were separated from each other anteriorly throughout their whole extent in the bladder. The enucleation was easy, the only difficulty being that of reaching with the finger the distal aspects of the tumour towards the rectum owing to its enormous size. There was considerable bleeding during the enucleation, but

this ceased on delivery of the gland from the bladder. The time occupied by the three stages of the operation—viz., the suprapubic cystotomy, the enucleation of the prostate, and its delivery from the bladder—was nine minutes. It is only during this period that the patient need be profoundly under the anæsthetic, and it varies from two to ten minutes, usually two to three minutes, according to the size of the prostate and its difficulty of enucleation.

The patient was very faint for three or four hours after the operation, but the pulse remained strong and regular. Convalescence was uninterrupted, the temperature remaining normal throughout. On June 5th some urine was passed per urethram, and wholly in this way on and after June 7th. On the 28th he left the surgical home, able to pass and retain his urine naturally as well as he ever did. On Dec. 19th, 1909, he called to see me in excellent health, untroubled by any urinary symptom, in which condition he still remains. The prostate (see Figure) is a fine specimen of the symmetrical type, weighing 16 oz., the second largest I have removed.

CASE 633.—The patient, a General, aged 80 years, came to consult me on the advice of Dr. Kalker, Bad Nauheim, Germany, on June 14th, 1909. He had had prostatic symptoms for nine years. In 1902 he underwent Bottini's operation in Berlin, but no improvement ensued. Cystitis almost continuously ever since. Phosphatic calculi were crushed and removed 19 or 20 times during the last seven years. The catheter had been employed for eight years; entirely dependent thereon for last three years; much hæmorrhage from time to time. He was in great distress, extremely feeble and emaciated; urine putrid. The prostate was very large and of the usual adenomatous type. A stone was felt in the bladder.

On June 17th I enucleated the prostate entire after removing a phosphatic stone of the size of a filbert from the bladder. The prostate weighed 5¼ oz., the operation lasting six minutes. There was considerable shock for two or three hours, as there generally is in very aged and feeble patients, but after this progress towards recovery was uninterrupted by any unfavourable event. Urine was passed normally on July 3rd and the wound was quite dry on the 6th. On July 15th he was walking about his room quite well, and on August 4th he came to see me before leaving for Lisbon in excellent health, able to pass and retain urine as well as ever. I have frequently heard from, and of, him, and he is now in excellent health, untroubled by any urinary symptom.

CASE 645.—The patient, a gentleman, aged 83 years, consulted me on Sept. 8th, 1909, on the advice of Dr. A. H. Croucher, Eastbourne. He had had prostatic symptoms for ten years. He had been entirely dependent on the catheter for seven years; repeated attacks of cystitis and orchitis; great difficulty in introducing the catheter, which had to be employed every four hours, and was attended by much pain, hæmorrhage, and discharge of pus. The patient was in fearful distress, both physically and mentally, being worn out by the disease. A truss was worn for double inguinal hernia. The prostate was greatly enlarged and of the usual adenomatous type.

On Sept. 10th, Dr. Croucher assisting, I enucleated the prostate, weighing 6½ oz., entire in its capsule, the operation lasting four minutes. The patient was very feeble for a couple of days. On Oct. 4th he began to pass urine naturally. On the 7th orchitis set in, but subsided in a week or 10 days. Convalescence was slow owing to the patient's extremely enfeebled condition from long suffering, and though sitting up and walking about from the middle of October he did not leave for the country till Dec. 7th, when he was in very fair health, and able to retain and pass his urine as well as he ever did. On Feb. 24th, 1911, he writes: "I am thankful to be able to give an excellent report of myself *in every way*; I am wonderfully strong and active and walk about four miles daily without fatigue."

Orchitis, which occasionally supervenes during convalescence from this operation, will be found to occur most frequently in persons who have already suffered from repeated attacks of this complication during catheter life.

Prostate, weighing 16 ounces, removed from patient aged 77 years (Case 621). A, Right lobe. B, Left lobe. C, Saucer-shaped lip connecting both lobes in bladder. (Two-thirds natural size.)

CASE 652.—A well-known French physician, aged 68 years, came to consult me with a view to operation on Sept. 20th, 1909. Prostatic symptoms had existed for four years. A catheter had been passed in June, 1909, for difficulty in micturition; since then he had been entirely dependent on the catheter. Though the bladder was washed out daily the urine contained about one-third pus, but no mucus. There was rapid loss of flesh, energy, and appetite; instead of the strong and active man I had seen him eight months previously, he looked extremely ill, and I at once suspected malignant disease. However, examination showed the prostate to be of the usual adenomatous type. He was also suffering from chronic bronchitis. I sent him into a surgical home forthwith and washed the bladder out daily, but without any diminution of pus, which obviously came from the kidneys. In consultation with my friend, Mr. F. Swinford Edwards, we came to the conclusion that no object was to be gained by delay, so on Sept. 28th, Mr. Edwards kindly assisting, Sir Benjamin Simpson and Professor Cuneo of Paris being present, I enucleated the prostate entire, weighing 4½ oz., the operation lasting four minutes. Recovery was uninterrupted by any unfavourable incident. Some urine was passed naturally on Oct. 18th, and wholly in this way on and after the 25th. By Nov. 4th he was walking about, able to retain and pass his urine normally as well as he ever did. The pus had almost disappeared. A few days after he left for Paris. I hear from him frequently: he has gone through a very active year's practice and is now in perfect health, untroubled by any urinary symptoms. One of the remarkable features of this case is the rapid disappearance of pus, which was passed down from the kidneys in enormous quantities, on removal of the prostate.

CASE 680.—A gentleman, aged 73 years, under the care of Dr. T. W. Smith of Brixton, consulted me on Nov. 20th, 1909. The usual symptoms of enlarged prostate, combined

with those of stone in the bladder, had existed for three years. Latterly he had had intense frequency of micturition, pain in the penis during and after micturition, hæmaturia, with putrid urine containing much pus and mucus. The condition of the patient was extremely distressful. He wore a double truss for inguinal hernia. The prostate was greatly enlarged and vesical calculus was suspected.

On Nov. 25th I opened the bladder suprapubically and removed a large urate stone weighing 1¼ oz. I then enucleated the prostate (weight 6½ oz.) entire, considerable difficulty being experienced in reaching its distal aspects, owing to the stoutness of the patient and the contracted and thickened state of the bladder from chronic cystitis. The operation was borne well and progress towards recovery was uninterrupted. Urine commenced to pass per urethram on Dec. 11th, and on the 15th the wound was dry. On Jan. 1st, 1910, he went home in good health, able to pass and retain his urine, which was normal, as well as he ever did. He has got married since then; and on Jan. 26th, 1911, he wrote: "I am happy to say the operation was entirely successful and I have had no return of the trouble. I am so well and fit that I am sorry now I gave up business."

CASE 684.—The patient, a gentleman, aged 76 years, was seen with Dr. H. R. Roger-Smith, Hampstead, on Nov. 23rd, 1909. Prostatic symptoms had existed many years, complicated by organic stricture for which bougies were passed periodically. The patient was in dreadful agony from retention of urine, and the fact that he was suffering from complete dementia rendered his case extremely pathetic and difficult to deal with. After much manipulation, which was rendered more difficult owing to the mental disturbance of the patient, I was successful in introducing a very fine olivary catheter through the stricture and into the bladder, through which some 20 oz. of urine drained away during a period of about three-quarters of an hour.

Next day, assisted by Dr. Roger-Smith, I opened the bladder suprapubically and drained it. It was not thought advisable to remove the prostate at once owing to the feeble condition of the patient and his mental excitement aggravated by the pain attendant on retention of urine. Narcotics in large doses had to be given; in fact, the patient had to be kept in a continual state of stupor to prevent his tearing off the dressings. On Dec. 6th I enucleated the prostate, which weighed 3½ oz., entire, and dealt with the stricture by internal urethrotomy. On the 24th he passed urine naturally, and on the 27th the wound was dry. The general health of the patient had vastly improved, and the mental symptoms had practically disappeared. On May 28th, 1910, this gentleman came to see me in perfect health, physically and mentally, in which state he still remains, I am informed. He can retain and pass urine, which is normal, as well as he ever did.

The recovery of this patient was, indeed, remarkable, and the complete disappearance of the dementia from which he had suffered was still more remarkable. This case is not unique in my practice, save that the dementia was so complete. In many of my prostatectomy cases in which marked mental symptoms had existed before the operation, no doubt due to the distressful symptoms attendant on enlargement of the prostate and its numerous complications in old age, these symptoms have completely disappeared after the prostate has been enucleated.

CASE 697.—On Dec. 8th, 1909, I was summoned into the country to see a gentleman, aged 66 years, in consultation with Mr. A. E. Griffith, Ross-on-Wye, who had suffered from the usual prostatic symptoms for five years. Three months before he had consulted a London specialist who pronounced the case one of cancer of the prostate. An eminent physician at Rome had also diagnosed aneurysm of the aorta. I found the patient in an extremely distressful condition, suffering from intense frequency of micturition and violent pain in the penis and hypogastric region. The passage of the catheter was extremely painful, so that he would only permit its employment once daily. Morphia to the extent of 1½ grains daily was given hypodermically to relieve the pain. The pulse was very feeble, intermittent, and irregular, the patient restless and exhausted. I passed a catheter and drew off about a pint of offensive urine, containing much pus and mucus. I endeavoured to sound for stone, but the patient could not bear the pain. The prostate was greatly enlarged, bilobed, smooth, very dense, but moveable. As the case was a very urgent one all arrangements were made to operate in his house next day, but in the morning the pulse was so feeble, irregular, and intermittent that the operation was postponed, as we feared that the patient would collapse on the table. Arrangements were made to wash the bladder out twice daily and to pass the catheter more frequently, also to endeavour to gradually reduce the morphia. Under Mr. Griffith's care the patient was so much improved that he was able to travel to London on Dec. 28th. On the 30th Sir R. Douglas Powell saw the patient in consultation with Mr. Griffith and myself. He considered that the heart conditions would stand an anæsthetic; the case was considered a very grave one, but the risk of operation had to be run.

On Dec. 31st, Mr. Braine giving chloroform and Mr. Griffith assisting, I opened the bladder suprapubically, removed an oval uric acid stone of the size of a filbert, and at once enucleated the prostate, which was very prominent in the bladder and weighed 4½ oz. The prostate presented no signs of malignancy; it was purely adenomatous. The operation was borne well, but the patient was much troubled by his heart symptoms, as well as nausea and flatulence, for three or four days, after which convalescence was uninterrupted. He commenced to pass urine naturally on Jan. 9th, 1910, and wholly in this way after the 26th. On Feb. 15th he left the surgical home in very fair health, able to pass and retain his urine as well as he ever did. On Dec. 28th 1910, he lunched with me. He is now in excellent health; the heart does not seem to trouble him, and, as he says, he thoroughly enjoys life once more.

CASE 740.—A native of the Colombian Republic, aged 61 years, consulted me on May 3rd, 1910, on the advice of Dr. Justinian Duran of Buga, and of Dr. Cayçedo, who accompanied the patient from Colombia. He had suffered from hæmaturia off and on since 1903, usually after violent exercise. He had had retention of urine frequently since 1904, requiring the urine to be drawn off by the catheter. He was completely dependent on the catheter in 1909 for a period of three months, but latterly had been able to dispense with this, his only trouble being frequency of micturition; he, however, had to avoid much exercise for fear of retention and hæmorrhage. Before seeing me the patient had consulted Sir Lauder Brunton, who was good enough to advise him to place himself in my hands for operation. I found that the prostate was enormously enlarged both in the rectum and in the bladder, quite moveable, and of the usual adenomatous type. I sounded but could find no stone.

I saw the patient again on May 25th, he having been fortified for operation by a pilgrimage to Lourdes in the meantime. And on May 30th, Dr. Cayçedo of Buga and Dr. Bauer of Maline, Sweden, being present, I removed the prostate entire, a fine specimen, weighing 8½ oz., in 3½ minutes. Recovery was uninterrupted. Urine commenced to pass by the urethra on June 15th, and wholly in this way on and after the 20th. On July 16th he went into the country for change of air. I saw this gentleman on August 3rd, before his departure for South America. He was in splendid health, able to pass and retain urine naturally as well as he ever did.

CASE 759.—On Sept. 9th, 1910, I saw a clergyman from New York, aged 74 years, sent me for operation by Dr. A. Grünberger of Carlsbad. The usual prostatic symptoms had existed for three years, with latterly extreme frequency of micturition. The prostate was much enlarged per rectum and very dense, but quite moveable. The catheter had never been employed. On Sept. 12th I enucleated the prostate entire. It was symmetrical, pear-shaped, two-thirds of it lying in the bladder; weight, 2½ oz. The time occupied by the operation was three minutes. He recovered without any unfavourable symptoms, leaving the surgical home on Oct. 15th, able to pass and retain urine as well as ever. On the 28th he wrote from New York: "I'm in prime condition," and on Dec. 20th, "I am enjoying perfect health."

This case is illustrative of the stage in this malady at which the surgeon should be desirous of meeting the patient with a view to operation, before any of the numerous complications attendant on the habitual use of the catheter occur. When dealt with at this stage there is practically no risk attached to the operation, and the patient is saved the annoyance and dangers attendant on so-called catheter life. I notice that the majority of medical men on whom I have operated have presented themselves at this stage, cognisant,

no doubt, of the dangers attending the employment of the catheter.

CASE. 763.—The patient, a gentleman, aged 69 years, was seen with Dr. F. H. Crowdy of Highgate on Sept. 9th, 1910. He had had prostatic symptoms for ten years. He had had retention seven years ago, which was relieved by catheter by Dr. Crowdy. Retention again took place six years ago. A surgeon who was consulted failed to pass a catheter and suprapubic cystotomy was performed. He had been entirely dependent on the catheter since the closure of the wound. Latterly he had been in great agony and had difficulty in passing the catheter; hæmorrhage in the urine and from the urethra. I drew off 6 oz. of filthy alkaline urine containing blood. The catheter passed in 15 inches before urine flowed. I found the prostate of enormous size projecting in the rectum and bladder; not sounded, but vesical stone was suspected. The patient was very stout; his general health was fair.

On Sept. 15th I opened the bladder suprapubically, Dr. Crowdy and Dr. Rosing Hansing, Skive, Denmark, being present. The cystotomy was tedious owing to the extensive nature of the suprapubic scar from the previous operation, and the uncertainty as to the position of the peritoneum in relation thereto. Found large urate stone lying against the prostate, the size of a hen's egg and weighing 1¾ oz. I then enucleated the prostate entire in its capsule with much difficulty owing to the stoutness of the patient, the unyielding density of the old scar tissue, and the great bulk of the prostate, which is a fine specimen of the size of a cocoanut and weighing 13¼ oz. There was very little bleeding, and the operation was borne well. The wound was slow in healing, so I had to tie in a catheter on Oct. 25th; this was removed Nov. 5th; 7 oz. of urine were passed naturally two hours after, the suprapubic wound being firmly closed. On Nov. 14th the patient was walking about untroubled by any urinary symptoms. He can retain 12 or 13 ounces of urine and pass it as easily as he ever did. I have heard from him quite recently to the effect that he is in excellent health.

CASE 772.—A gentleman, aged 68 years, consulted me on Sept. 9th, 1910, on the advice of Dr. J. A. Wright, Cambridge. He had had prostatic symptoms for six years; a catheter had been employed twice daily during the last three years; he could pass about half his urine naturally but with great frequency, except for a few hours after using the catheter. He suffered from hæmaturia frequently. He was cystoscopically examined a week previously by another surgeon, but no stone was discovered. He had suffered much from fever and rigors latterly. There was rapid loss of flesh, energy, and appetite. I drew off 12 oz. residual urine containing pus and of disagreeable odour. The prostate did not feel much enlarged, was very dense, but fairly moveable. The nature of the growth was doubtful. The rigors and fever continued, the temperature varying from 100° to 102° F. daily, with complete loss of appetite. The patient was reduced to a skeleton almost.

On Sept. 20th I opened the bladder suprapubically for drainage and with a view of eventually removing the prostate. From this day the temperature remained practically normal, appetite returned, and the patient put on flesh, so that on Oct. 3rd I was able to complete the operation by removal of the prostate. I found no less than nine uric calculi, some of them the exact forms of dice and pyramids, lying in a narrow-mouthed cavity behind the prostate, and weighing 235 grains. I did not notice these at the previous operation, probably because the patient was so feeble that I did not wish to keep him under an anæsthetic longer than was absolutely necessary to drain the bladder. The prostate weighed 1½ oz., and microscopic examination showed that it was benign. The patient made an excellent recovery and left for home on Nov. 2nd in good health, untroubled by any symptoms, able to retain and pass urine normally.

CASE 780.—The patient, aged 83 years, was admitted to St. Peter's Hospital on Oct. 22nd, 1910, suffering from enlarged prostate. He had had the symptoms for five or six years. He had had retention five years ago and frequently since then which was relieved by catheter. The catheter had been employed more or less regularly for three months, but had intense frequency of micturition and scalding, only an ounce or so of urine being passed each time. The prostate was much enlarged, rounded, bilobed, smooth, soft, moveable. The patient was very stout; the heart was irregular; the urine was clear and practically normal.

On Oct. 26th I enucleated the prostate, weighing 4½ oz., the time occupied being three minutes. Recovery ensued without any unfavourable symptom. The wound was dry and all urine passed naturally on and after Nov. 9th. He was discharged cured on Nov. 26th. The rapidity with which the suprapubic wound closed in a man of this age is remarkable.

CASE 782.—A Roumanian gentleman, aged 68 years, was brought from Bucharest for operation by Dr. S. Irimescu of that place on Nov. 6th, 1910. He had had complete retention of urine two years previously; since then no urine passed except by catheter; suffering from chronic cystitis. He had been treated by various surgeons in Bucharest and Vienna; had had the prostate massaged per rectum daily for months on the advice of one of them. I found the prostate much enlarged and of the usual adenomatous conformation. The urine contained much pus and was foul smelling. There was much difficulty at times in introducing the catheter and blood was frequently drawn. His general health was very fair.

On Nov. 8th, Dr. Irimescu being present, I enucleated the prostate entire, weighing 3½ oz. Recovery was uninterrupted, some urine passing per urethram Nov. 22nd, and wholly in this way on and after the 26th. Owing to the chronic cystitis it was necessary to wash the bladder for some days with a solution of nitrate of silver, gradually increasing in strength. By the middle of December he was walking and driving out. On Dec. 26th he started home to Bucharest in excellent health, able to retain and pass urine as well as he ever did. I have recently heard from Dr. Irimescu that he is quite well.

CASE 786.—A gentleman, aged 60 years, consulted me on Oct. 2nd, 1910, on the advice of Dr. W. G. Bigger, Streatham, and of Sir Thomas Barlow, with a view to operation. Retention of urine occurred five years previously; he had been entirely dependent on the catheter since then; frequent hæmaturia had been present since July last. The urine contained pus and blood and 22·7 parts per 1000 or 35·7 grammes per diem of sugar. He had had orchitis twice on the left and once on the right side. The prostate was much enlarged and of the usual adenomatous type. The case was reported as a favourable one for operation only for the glycosuria.

On Nov. 16th I enucleated the prostate, which weighed 3½ oz., entire, Dr. Bigger assisting. The time occupied by operation was three minutes. I found a small phosphatic stone in the bladder. The operation was unattended by shock or other unfavourable symptoms subsequently. Urine began to pass per urethram on Nov. 30th and the wound was closed Dec. 7th. On the 24th he left the surgical home in good health, able to retain and pass urine as well as he ever did. On Feb. 7th Dr. Bigger wrote that the patient was quite well and that there was "no trace of sugar in the urine."

This case is a typical illustration of what I have often verified in practice—viz., that a considerable degree of glycosuria is no bar to this operation. In some cases the sugar disappears after operation, but why it does so I am unable to explain.

CASE 787.—A Swiss gentleman, aged 75 years, came from Geneva on Nov. 18th, 1910, to consult me with a view to operation, on the advice of Dr. de Valcourt of Paris. Prostatic symptoms had been present for four years. In May, 1910, when on a visit to Paris, he had retention of urine. The doctor called in failed to pass a catheter, and next day his bladder was opened suprapubically by a Paris surgeon. After 10 days' drainage a *sonde à demeure* was passed, and in due course the suprapubic wound closed, but no urine could be passed save by means of a catheter used every four or five hours. On his return home to Geneva the suprapubic wound reopened; *sonde à demeure* again employed by Geneva surgeon with closure of fistula. Since then the wound had opened and closed frequently, but no urine was passed except by the catheter. Under these circumstances he was advised by the Paris surgeon to keep the suprapubic fistula open and wear a urinary apparatus, as prostatectomy was a dangerous operation. On his arrival in London I found him in a very wretched condition. The wound was temporarily closed, but he had great difficulty and pain in introducing the catheter; he was literally almost a skeleton.

The urine was very offensive and contained much ropy mucopus. The prostate was much enlarged, bilobed, soft, and moveable.

On Nov. 21st I opened the bladder suprapubically and enucleated the prostate entire in its capsule. It was pear-shaped and very prominent in the bladder; weight 2¾ oz. No unfavourable symptoms supervened. As the wound was slow in healing I tied in a catheter on Dec. 13th; this was removed on the 17th, after which his urine was retained and passed naturally without any trouble. He came to my house on Dec. 28th, to say farewell before starting for Geneva. He had put on much flesh, was in excellent health, and could retain and pass his urine, which was normal, as well as he ever did. On Feb. 19th he writes: "I have no urinary troubles."

CASE 800.—This patient, aged 63 years, who was admitted to St. Peter's Hospital on Dec. 19th, 1910, had his bladder opened suprapubically in another hospital in February, 1909, and a vesical stone and a portion of the prostate removed, since which time he had had a suprapubic fistula off and on in spite of a plastic operation in May, 1910. On admission he was suffering from cystitis with vesical phosphatic calculus. He had 20 oz. of residual urine; no urine passed per urethram; drained away through a very narrow suprapubic fistula. The prostate was felt enlarged per rectum, bilobed, smooth, soft, and fairly moveable.

On Dec. 30th I enlarged the suprapubic opening, removed the calculus, of the size of an almond, and then enucleated the remaining portion of the prostate, weighing 1¾ oz. The portion of the prostate projecting in the bladder had been previously removed, but the bulk of the lateral lobes, lying outside the bladder, had been left behind. The patient made a rapid recovery and was discharged cured on Jan. 25th. On the 31st he came to see me at the hospital in excellent health and spirits, the suprapubic fistula being firmly healed and the patient being able to pass and retain his urine naturally as well as he ever did.

This case is one of many in which I have enucleated the remainder of the prostate after a portion had been taken away by another surgeon. I have given several examples in my published writings. They one and all illustrate the futility of partial prostatectomy and the complete cure, with return to normal functions of the bladder, after enucleation of the portions of the prostate left behind.

These 200 patients varied in age from 52 to 87 years, the average age being 69¼ years. There were 11 octogenarians amongst them. The weight of the prostates varied from ½ to 16 oz. In the great majority the patients were entirely dependent on the catheter for periods varying up to 18 years. Most of them came in broken health, few were free from serious complications, and many were almost moribund at the time of operation. Indeed, in the majority of cases the patients have come under my care for operation when their condition under catheter life had become so wretched as to render life unbearable.

In connexion with these 200 operations there were nine deaths, or 4·5 per cent., the causes of death being as follows:—

1. Five died from *uræmia;* in two of which, aged 59 and 71 years respectively, necropsy revealed extensive pyelonephritis; in two, aged 76 and 83 years, necropsy showed long-standing backward pressure changes (aseptic) leading to almost complete absence of secreting tissue in the kidneys, only a thin layer of cortex remaining; and in one, aged 73, the patient was suffering from an extreme form of paralysis agitans.

2. Two died from *exhaustion.* In one of these, in which death occurred 13 days after the operation, there were almost daily rigors with high temperature, though the bladder was clean; no doubt the kidneys were pyelonephritic, though no necropsy was obtained; the other, aged 87 years, had been confined to bed for six weeks from pneumonia immediately previous to operation.

3. One, aged 74 years, a very stout patient who was suffering from severe cystitis, chronic asthma, and bronchial catarrh with dilated heart, succumbed from bronchitis 22 days after operation. Spinal anæsthesia was tried in this case but failed, and general anæsthesia had to be employed, which, no doubt, was responsible for the fatal bronchitis.

4. In one case, aged 78 years, double vasectomy and subsequently castration had been performed by another surgeon several years before, without any benefit to the prostatic symptoms. For two years before coming under my care he had passed his urine through a suprapubic fistula established for this purpose. The apparatus fitted badly, owing to the bladder being filled by the enormous prostate, causing great pain and frequent hæmorrhage, and urine constantly leaked beside the tube. Altogether the patient was in an extremely wretched condition, and begged to be relieved of his prostate at any risk. The prostate, which weighed 11 oz., was easily enucleated, but the patient succumbed to *shock* in eight hours.

It will be observed that in one and all of these nine cases in which death supervened on the operation the patient was afflicted with one or more grave complications which must have proved fatal after much suffering. In no case did death ensue where the vital organs were sound at the time of operation. Had the cases been selected, therefore, the mortality would have been *nil*. But, as will have been gathered from the cases described in this paper—and numerous others of similar gravity could have been given—selection would have condemned most of them to a painful death after more or less prolonged suffering, instead of the complete restoration to health that ensued in each case from operation. It is, of course, impossible to avoid a certain mortality when such cases are operated on; the wonder is that it is so small considering the magnitude of the operation and the age and condition of the patients. But to refrain from operating in such cases, when there is any prospect of success, is, to my mind, utterly unjustifiable.

Harley-street, W.

THE TREATMENT OF PULMONARY TUBERCULOSIS WITH BOVINE TUBERCULIN.[1]

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THE treatment of consumption and other forms of tuberculosis is of such intense urgency and importance that we are justified, nay, even compelled, thoroughly to test any method which is based on scientific investigations and knowledge, with a view to reduce the awful mortality from the disease in this country. It is a sad reflection on our civilisation that 50,000 useful lives are wasted every year in Great Britain alone from this scourge, and this mortality can only be reduced by the combined efforts of the medical profession in diffusing knowledge and treatment, in coöperation with the health authorities of the country and the general public.

It is necessary briefly to recapitulate my views on the origin and distribution of tuberculosis, so that I may show clearly my reasons for using tuberculin prepared from bovine sources. In my original paper of 1903 I attempted to show that "human and bovine bacilli" are divisible into two distinct types of a common species: (1) Typus humanus, and (2) typus bovinus.

Another fact of the most profound importance in studying this problem is that for centuries man has been accustomed to feed upon cattle and their products, milk, butter, cheese, &c., and in this way the human body has become tolerant to bovine tubercle bacilli. Whilst I firmly believe that human and bovine bacilli are different types of parasites, yet I am convinced that bovine bacilli are freely communicable to humans, and are the cause of a large amount of tuberculosis in children. I believe that man is attacked by two distinct varieties of tubercle, one conveyed by infection from person to person, the other by receiving bovine bacilli into the body by means of milk, and other products of infected cattle, &c. The difficult part of the whole problem is to decide which particular lesions are produced by the different forms of bacilli, and whilst I consider consumption to be *the* example of the disease caused by the typus humanus, all the surgical forms of the disease, together with acute miliary tubercle, are probably caused by the typus bovinus.

I look upon consumption as in a class by itself, and after an observation of over 5000 cases of tuberculosis, in hospital

[1] Based on a lecture delivered at the Medical Graduates' College and Polyclinic.

and elsewhere, I am convinced that it is the result of infection from a consumptive person, and has little or no relation to infected food. We must have all been impressed with the fact that in by far the great majority of cases of consumption the disease is strictly limited to the lungs, in some cases the larynx is involved, and in many others there is secondary infection of the intestines. It is, however, rare to find any other tuberculous lesion associated with consumption, such as enlarged glands, diseased joints, meningitis or peritonitis of a tuberculous nature, or even lupus. On the other hand, it is most rare to find any pulmonary lesion in cases of surgical tuberculosis excepting in the course of a general miliary tuberculosis indicating a blood stream infection which is the end of the disease.

It must not be assumed, however, that all cases of pulmonary tuberculosis are of human origin. I have reserved the word "consumption" to those cases where the infection is from a previous case of consumption, but the lungs may be attacked in other ways: First, by a direct extension downwards from the lymphatic glands in the neck, commencing perhaps as one tuberculous gland and slowly or rapidly involving a complete chain of glands which extends directly to the apex of the lung and is rapidly disseminated throughout the entire lung and even to the opposite lung. This condition when advanced cannot be distinguished from ordinary phthisis and may even proceed to extensive cavitation. From its causation by bovine bacilli I propose to call this condition "bo-phthisis" to distinguish it clinically and pathologically from ordinary consumption. I have observed 27 cases of "bo-phthisis" extend from glands in the neck as a primary infection and have detailed post-mortem notes in 24 of them.

Then, again, the lungs may be infected by direct extension from the alimentary tract within the abdomen. The mesenteric glands are involved as a primary infection, then by direct lymphatic extension upwards through the diaphragm to the bronchial glands, and thence to the lungs. In these cases, if the patient lives long enough, the lungs undergo destructive processes, with formation of cavities. Finally, the lungs may be involved in an acute miliary tuberculosis, which, as a rule, destroys life so quickly that there is no time for the lungs to break down and nothing in the way of treatment is of any avail. To develop the argument one step further, we come to the all-important question of antagonism of the two varieties in the human body. I have come to the conclusion that human and bovine tuberculosis are antagonistic to each other in the human body, and that children who have suffered from bovine tuberculosis in the form of glands, spinal caries, joints and tuberculous peritonitis and lupus are immune against consumption, and that persons who have developed consumption are immunised against the surgical forms of the disease. Very much the same result is produced by vaccination against small-pox. This theory of mine has also received great support by the work of von Behring and Romer. In endeavouring to produce immunity against tuberculosis in cattle they found that they could only do so by using the human strain of bacilli, and that all their efforts were in vain when bovine bacilli were used. If human bacilli will protect cattle it is natural to suppose the converse, that bovine bacilli in children will protect them against consumption, which is an infection with human bacilli. As supporting this argument I may mention that last year I attended a post-graduate course of lectures at the Maritime Hospital in Berck-sur-Mer, where over 1000 cases of tuberculosis in children were being treated. The patients were all suffering from surgical forms of the disease, and I was informed that out of this large number the lungs were only involved in seven cases.

Ten years ago I published a list of cases which had been treated with Koch's tuberculin R. My conclusions at that time were that Koch's tuberculin had little or no immunising effect in cases of phthisis, although one of the patients is still alive, though with chronic ulcerative phthisis. Since then 48 cases were treated with Koch's tuberculin, but the results were not such as to encourage the treatment. It occurred to me, however, to try the effect of a tuberculin prepared from bovine bacilli and made in exactly the same method as tuberculin R. I had it prepared from my own pure cultures of perlsucht, kindly sent to me by Professor Calmette of Lille. As far as I knew this was the first occasion in which bovine tuberculin was used, and I am glad to say that extended use of this tuberculin has been fully justified by the results of treatment.

In all, 108 patients suffering from consumption have been treated with bovine tuberculin, and although in this short paper it is impossible to enter into details of treatment I propose briefly to record the results. Adopting the classification of Turban I will divide my patients into three classes: in first stage, 28; in second stage, 65; in third stage, 15. It will be at once admitted that my cases have not been as favourable for treatment as I would have desired, but in practice we must accept patients as they come; we cannot, unfortunately, secure all our cases in the early stages of the disease; if we could we should be able to furnish better results. As far as possible the ordinary and approved methods of treatment in consumption have been associated with tuberculin, but this only refers to cases in private practice, as the majority of the hospital cases have been treated on the outside balconies and open-air wards in the centre of the city of Liverpool. Even with these disadvantages the results have been on the whole excellent.

Method of Treatment.

As far as possible the rules laid down by Goetsch, a great authority on the subject, should be adhered to: 1. Tuberculin should only be given when there is little fever. 2. The dose of tuberculin should not be increased until the previous amount is tolerated without any reaction. 3. The patient must rest in bed before the injection and for 24 hours afterwards.

The results of treatment with tuberculin have been reported by Goetsch and are as follows: Out of 175 cases treated during the last 10 years 125, or 71 per cent., have been cured, whilst the remaining 50 were improved. We must remember, however, that his were carefully selected and all in an early stage of the disease.

Manner of Injections.

The injections must be given with the greatest care and with strict aseptic precautions. The skin over the outer side of the forearm is carefully cleansed with lysol and spirit, and then gently sprayed with a little chloride of ethyl, as some patients have a dread of the needle. The injection is then given in the usual way. The most vital point in the administration of tuberculin is the dosage, and my practice after a long experience is uniformly as follows. The minimum dose is 1/10000th part of a milligramme, or 0·0001. If no reaction follows this injection in 24 hours, such as headache, sweating, rise of temperature, or rapid pulse, the next dose may be given in one week, and which is only slightly increased. The effect of each injection is carefully observed, and if the patient is feeling no disagreeable symptoms the weekly injections of slowly increasing doses are given until at the end of 12 weeks the maximum dose of 100th part of a milligramme is reached, or 0·01 mg. I never exceed this dose, and if necessary repeat this amount for several weeks if the patient is responding well to it. As a general rule, after the first two or three injections the patients feel better, the temperature drops to normal, the appetite is improved, and there is a feeling of general benefit. Not even the slightest bad effect has been observed from the injections, but, of course, great care must be exercised in the technique, and a careful watch must be kept on the doings of the patient during the course of treatment.

In every case, before treatment is commenced, the diagnosis of definite tuberculosis must be made either by finding tubercle bacilli in the sputum or by obtaining a decided reaction to tuberculin by the cuti or von Pirquet's test. It is, of course, very desirable that all the other methods of treatment, such as open-air life, gentle exercise or graduated labour, together with extra diet, should be combined with tuberculin so as to obtain the maximum benefit. The very best results are obtained under these conditions, but I have had many patients under my care who have made a good recovery without the advantages of an open-air life, and have undergone the treatment either in their own homes whilst attending to their ordinary duties or in the ward of a general hospital.

Results of Treatment.

I will summarise the results of treatment very briefly as they occurred in the various stages.

First-stage cases.—Twenty-eight patients suffering from consumption in the first stage were treated with bovine tuberculin, and I must at once admit that they were all

favourable cases for cure. The ages of these patients were as follows: 5–10 years, 4; 10–15 years, 3; 15–20 years, 14; 20–25 years, 5; 25–30 years, 2; total, 28 cases. In all the cases under the age of 15 years there was a definite source of infection at home, either a consumptive parent or relative. In the other patients the cause of the infection was not definite. Thirteen of these patients had all the advantages of an open-air life and most of the comforts which money could purchase. The remaining 15 were treated in the open-air wards of Mill-road Infirmary, with, of course, all necessary comforts.

Each case was carefully tested so that we were quite sure of its tuberculous nature, but even in this respect we cannot always be absolutely sure of our diagnosis. If tubercle bacilli are found in the sputum associated with definite physical signs in the chest the case is certain, but if no tubercle bacilli are found (as is frequently the case) in the early stages of the disease, then we have to rely upon one of the tuberculin tests, of which there are four: (1) Calmette's ophthalmo-reaction; (2) von Pirquet's reaction; (3) Moro's ointment test; and (4) injection of tuberculin. The latter test is not used in the human body, and is reserved for the diagnosis of the disease in cattle and other animals.

The ophthalmo-reaction is good but not always reliable, and it has the disadvantage of occasionally causing a purulent conjunctivitis, and on that account I have ceased to employ it.

The cuti-reaction of von Pirquet is an excellent and suitable one, and consists of merely vaccinating the patient by scratching the skin of the arm and inserting a small quantity of tuberculin. If the patient has any tuberculous focus in the body, a definite reaction will follow in the course of from 6 to 24 hours, as evidenced by an erythematous blush around the site of inoculation with a little tender induration. This may in rare cases become pustular and may even induce cellulitis. As a general rule, however, it is a safe and reliable test.

Moro's test is very useful for children, and consists in simply rubbing a little ointment which is impregnated with tuberculin into the skin. If the case is tuberculous a slight, or even extensive, papular or pustular rash appears on the skin and lasts for three or four days. I want, however, to call attention to an apparent fallacy in using these tests.

Because a reaction follows, it does not necessarily prove that the acute lesion from which the patient is suffering is of a tuberculous nature, such as, for instance, a pleurisy, broncho-pneumonia, &c. The reaction simply proves that there is somewhere in the body a focus of tuberculosis, such as a bronchial gland, mesenteric gland, or some other slight lesion which may be causing no harm and which is quiescent, and it must be remembered that the lesions which are localised, such as glands and joints, will produce more violent reactions than those of a more extensive nature, such as phthisis pulmonalis. I mention this by the way as the result of my own experience, and which is important to bear in mind in applying these tests. To return to the consideration of these 28 cases.

At the present time—that is, two years after the tuberculin—I have to report that in 18 cases the disease appears to have been arrested. Two patients have had relapses and are now undergoing another course of tuberculin, and the remaining eight have passed away from my observation, although I have every reason to think that they are in good health. There can be no question whatever of the beneficial influence of tuberculin in all these patients, and it certainly had the effect, combined, of course, with other methods, of preventing the further spread of the disease in the lungs.

The second stage cases numbered 65, according to Turban's classification. They varied considerably, both in extent of lung affected and constitutional debility. The ages of these patients were as follows: 5–10 years, 6; 10–15 years, 13; 15–20 years, 19; 20–25 years, 18; 25–30 years, 2; 30–35 years, 4; 40–50 years, 2; 50–60 years, 1; total, 65 cases. The same good effects of tuberculin were observed in a great many of these patients, whilst in a few no good permanent results followed.

Out of this total of 65 patients 41 are apparently well, and 30 of them are following their usual employment. Sixteen have shown one or more slight relapses, 3 are now progressing, and 5 have died within the last two months. I feel sure that without tuberculin a great many of these patients would have developed a progressive stage of the disease and have died long ago, and I am convinced of one fact, that bovine tuberculin has the power of producing a sufficient immunity in the human body to arrest the progress of an early infection or even a moderately severe infection, and in a fair percentage of cases to arrest the infection altogether.

Third-stage cases.—I have been induced to try the effects of this treatment in 15 cases where there did not appear to be much hope of doing any good whatever, but to my surprise and pleasure, some of them have received great benefit, and actually three patients have made a complete recovery. I cannot give any general explanation as to why this should occur, excepting to state that some patients have greater amount of natural resisting power to tubercle, and respond well to treatment.

Of the 15 cases 3 have quite recovered, 6 are much better, and attending to their duties, and 6 have died after improving to some extent. Regarding general and medicinal treatment, plenty of fresh air, rest, and gentle exercise as prescribed, good nourishing food, with baths, massage, and in some cases electricity, have been adopted. Local symptoms have to be treated as they arise, but I have found great benefit from the constant use of a tonic containing quinine. Hypophosphites and nux vomica to increase the appetite and thiocol and inhalations of creasote, iodoform and iodine to relieve cough. Petroleum emulsion with hypophosphites is often useful, whilst cod-liver oil (Peter Moeller) or combined with malt extracts are of the greatest benefit.

We cannot rely on one remedy alone, but in treating such a serious and distressing disease as consumption we ought always to give tuberculin a fair trial, for it may cure the patient when nothing else will, it may greatly relieve his symptoms, and if given in a scientific manner it can never cause the slightest harm.

General Conclusions.

After a large experience in the treatment of tuberculosis in all its forms, I have come to the firm conclusion that tuberculin is a valuable remedy in a great many cases. The special variety of tuberculin to be used must be determined by the nature of the infection with which we have to deal, and as nearly all cases of pulmonary tuberculosis or consumption are of human origin—that is, they are caused by the bacilli of the typus humanus—it is necessary to use a tuberculin prepared from bacilli of the typus bovinus, and named bovine tuberculin. In fact, we must inject the opposite kind of tuberculin. Bovine tuberculin is less irritating and less liable to produce reaction when given in the larger doses in cases of consumption.

Tuberculin is not a specific remedy in severe tuberculous infections; combined with other methods of treatment, directed to raise the general nutrition, it assists in producing immunity of a more or less temporary character, but its chief effect seems to be to prevent the further spread of the disease, and to inhibit the growth of the bacilli in the human tissues, so that as the original tuberculous process dies out no further development takes place. In other words, it has a specific action on the blood in retarding the growth of tubercle bacilli. The immunity which it produces must be arrived at slowly and with caution, so that the blood may be very gradually accustomed to its presence, and it cannot be too strongly emphasised that all tuberculous infections of however mild a type become constitutional or blood infections in a very short time, as is evidenced by the cuti-reaction of von Pirquet. In fact, the milder the infection in the human body the greater the reaction after inoculation with tuberculin.

It is a matter of common experience that a child with a small tuberculous neck gland will give a well-marked cuti-reaction, whilst an advanced case of tuberculosis may give no reaction at all. I would like here to sound a note of warning against the use of tuberculin by injection in cases where there is any encysted pus or tuberculous material in a state of caseation. Unless there is an outlet for this caseating débris there is danger of local reaction with dissemination of the bacilli and a possible blood stream infection. In suppurating tuberculous glands in the neck the pus should be removed first and then tuberculin may be given with safety and benefit.

In conclusion, I would like to express my opinion after treating over 300 patients with injections of tuberculin that it is a remedy of the greatest value, especially in early cases

and where the deposit of tubercle is localised, as in one apex, or in a lymph gland or single joint, but where the tuberculosis is disseminated and complicated by secondary infections the use of tuberculin cannot be expected to be of much avail. It ought, however, to be tried in every case with the hope of some relief or possible benefit, as we cannot allow the patient to suffer and die without making every effort to arrest the progress of the disease.

Tuberculin is not going to revolutionise the treatment of tuberculosis. It is a valuable aid to the other methods of treatment, hence it must be used with care and discrimination and with a full knowledge of its dosage and therapeutic effects.

Liverpool.

ACUTE INFLAMMATION OF THE THYROID GLAND.

BY W. SIBBALD ROBERTSON, M.D., CH.B. EDIN.

ACUTE inflammation of the thyroid gland is generally looked on as a very rare disease, and very little consideration is devoted to it in the standard works on medicine and surgery. My attention was directed to it while I acted as house surgeon to the late Professor Annandale in Edinburgh Royal Infirmary, where I met with two cases of the affection; and it has occurred to me that a description of these and of a further case that has recently occurred in my own practice, supplemented by the results of a somewhat extensive search through the medical journals of almost a hundred years, may prove of interest.

The first case was that of a girl, aged 15 years, who had been suffering for two years from chronic goitre. Till about 10 days before her admission to the infirmary this had caused no unpleasant symptoms, but at that time she contracted a cold, accompanied by a certain amount of laryngitis. The thyroid gland began to enlarge rapidly and continuously, and difficulty of both breathing and swallowing appeared and soon became so alarmingly severe that her admission to hospital was decided on. During the journey she collapsed, and my first introduction to her was when, on coming out of the operating theatre, I saw a man remonstrating with a porter for bringing his daughter up to the ward, as she was to all appearance already dead. It was only the immediate performance of tracheotomy and artificial respiration that saved her from asphyxiation. On examination the goitre was found to be of large size, affecting all three lobes, and extending down to the manubrium sterni. It was tender on pressure and painful, but there was no reddening of the skin. It followed the movements of the larynx on deglutition. The inflammatory symptoms persisted for about a fortnight, the evening temperatures varying from 101·8° to 103·2° F., and the morning from normal to 100·6°. There was at first a great deal of trouble with the tracheotomy-tube, partly owing to the large size of the tumour and partly to the amount of muco-purulent material which collected in the trachea. After a few days, a long tube which had been specially made was inserted, and it proved much more satisfactory. At the end of a fortnight the temperature returned to normal, the dyspnœa and dysphagia lessened, and the thyroid swelling rapidly decreased. Five and a half weeks after admission the tracheotomy-tube was finally removed, and by the eighth week the goitre had resumed its normal size, and the patient was then dismissed from hospital. I heard of her two years later, and the goitre was then of the same size as before and had given her no further trouble.

The second case was one of acute inflammation in a previously healthy gland—acute thyroiditis as opposed to acute strumitis. The patient, a girl aged 16 years, was admitted complaining of a painful swelling in the neck. About six weeks previously she had developed a croupy cough, accompanied, a week later, by a slight but increasing difficulty in breathing. Poultices and inhalations of steam were tried, and it was not for some time that her mother noticed a swelling on the neck. The increase of the swelling and of the dyspnœa became so marked that the patient was sent into hospital. Her family history was excellent, and beyond measles and influenza in childhood and an occasional sore-throat she had had no previous illnesses. Her recent health had been perfectly good. The thyroid gland on her admission to the Edinburgh Royal Infirmary was much enlarged in all its parts and extended down behind the manubrium sterni. The consistence of the swelling, which moved with the larynx, was firm and elastic; there was tenderness, but no fluctuation. The skin over the tumour was slightly reddened, and there was distension of the neighbouring veins. Dyspnœa was marked, and there was some dysphagia. The temperature was only slightly raised. Professor Annandale decided to operate, and under chloroform an incision was made in the middle line of the neck, and the isthmus of the gland was exposed and divided with the cautery. The trachea was found to be much flattened and displaced to one side, and it was with great difficulty that tracheotomy (which became necessary from the distressed condition of the patient's breathing) could be performed. The long tube which had been specially made for the previous case was also employed in this. The temperature rose and remained at about 102° F. till the fifth day, after which it returned to normal and did not rise again beyond 99°. With the fall the pain and swelling began to decrease, and the breathing, already much relieved, became still easier. In a few days all the symptoms were relieved and the swelling had disappeared. Three weeks after the operation she was sent home with the wound healed and, except for the scar, no sign of the trouble left. The patient was again under Professor Annandale's care 18 months later, when he removed her right ovary for lympho-sarcoma. The thyroid gland was then apparently quite healthy.

The third example of the disease which I have met with occurred in a woman 29 years of age. I attended her during an attack of faucial diphtheria of only moderate intensity, which pursued a favourable course for a fortnight. At that time an acute enlargement of the thyroid gland, accompanied by pain in the front of the neck, showed itself. Examination disclosed an oblong swelling of the whole gland, in size about that of a large orange. The temperature was not raised and there were no dyspnœic symptoms. In spite of the application of local sedations the symptoms increased in severity, and ten days later the tumour extended as far as the sternum, the skin over it was reddened, and the pain and tenderness were intense. Fluctuation could not, with certainty, be obtained, but, under the impression that suppuration was present, I advised her admission to the Scarborough Hospital, where on operation an abscess of the thyroid was opened and drained. The patient made an uninterrupted recovery, and no permanent enlargement of the gland now remains.

Cases of acute inflammation of the thyroid gland fall into two classes—those of acute thyroiditis, in which a previously healthy gland is attacked; and those of acute strumitis, in which the gland is already goitrous. According to Eiselsberg[1] the latter is the more frequent condition; but I have been able to consult the published records of 93 cases, in addition to those I have described, and in only 33 of the 96, or 34 per cent., is mention made of pre-existing goitre.

The disease may occur as an epidemic. One such occurred at St. Etienne in 1864; in another at Berne children already suffering from measles were affected. French writers on military surgery have reported many epidemics in garrisons, and Viry and Richard, who described that at Belfort in 1877, held that it had no relation to ordinary goitre, but belonged to the class of acute specific diseases.

It is a disease more common in women than in men. Of the 96 cases collected, 52 were females, 32 were males, while in the remaining cases the sex of the patient is not stated. It occurs most frequently between the ages of 20 and 40 years. Forty-one of all the 96 cases were between these ages. The next most commonly affected ages are those between 40 and 50 years.

As regards the etiology of the condition little is certainly known. Trauma, circulatory congestion (as in labour, the excessive use of the voice, and the like), and exposure to cold have been looked on as predisposing conditions; but it usually arises either in an already goitrous gland, or as a complication in the course of an infectious disease. Of my series of cases, 35 (33 + the 2 described above) occurred in glands already goitrous, 7 in the course of acute

[1] Die Krankheiten der Schilddruse, Deutsche Chirurgie, von Eiselsberg, Billroth und Luecke, Stuttgart, 1901.

rheumatism, 6 of acute pneumonia, 6 of acute enteric fever, 4 of acute erysipelas, 4 of influenza, 4 of malaria, 4 of diphtheria, 3 of tonsillitis, and 3 during the puerperium.

The symptoms vary accordingly as the inflammation of the gland is a primary affection or arises in the course of some pre-existing disease. In the former cases there are the initial chills, malaise, and headache, common to all febrile infections. Pain is felt in the region of the gland, usually in one lobe (more commonly the right), often radiating to the ear and side of the neck, lancinating in character, especially aggravated by extension of the head. As a result the attitude may be somewhat characteristic—the head bowed, and the chin supported on the hand. Local swelling usually appears in a day or two, and as a mechanical result dyspnœa may be marked and some degree of dysphagia may be complained of. The voice may be affected—even absolute aphonia has been described—and an irritative cough with slightly blood-stained expectoration or a true hæmoptysis may be present.

The cases terminate by resolution or go on to suppuration and even gangrene. Suppuration took place in 40 of the 96 cases in the series. Usually after three or four days there is no further increase in the severity of the symptoms, and the temperature chart shows matutinal remissions. Then the tumour, which has been steadily growing, begins to diminish in size, and the gland finally regains its normal appearance, or some degree of permanent enlargement may persist. The average total duration of this form of thyroiditis was in the cases collected almost exactly 14 days.

The thyroiditis associated with mumps and influenza has never been observed to suppurate; all the malarial cases of which I have records, and all the cases connected with acute rheumatism, tonsillitis, erythema nodosum, and other rheumatic affections ended in the same way. On the other hand, in all the pneumonic and puerperal cases, and in a very large majority of the typhoid, diphtheria, and erysipelas cases the inflammation went on to suppuration.

In 27 of the 41 cases in which suppuration occurred there was a pre-existing goitre. When suppuration occurs the pain becomes more intense and its lancinating character more marked; the skin over the tumour becomes fixed, the cervical glands enlarge, and there is œdema of the neck and thorax. Fluctuation may be late in appearance and difficult of detection; and even exploratory puncture may be ineffective from the thickness of the pus. If untreated, the abscess may open externally (in which case spontaneous cure may occur), or it may perforate the trachea or œsophagus, or burrow and reach the mediastinum. The suppuration usually takes the form of small miliary abscesses in the bands of connective tissue that traverse the gland. Bacteriological examinations of the pus were made in only seven of the septic cases in my series. Of these the pneumococcus was found in four, B. typhosus in two, and a streptococcus in one.

Gangrene is very rare and very fatal. It occurred in only one case in my collection; and according to Richardson[2] only 8 cases in all are known to have occurred. It develops rapidly and may be accompanied by gas formation and great distension of the skin.

The diagnosis of the condition should as a rule be simple, if attention is not withdrawn from the thyroiditis by the more familiar symptoms of an accompanying disease, and certain similar conditions must be excluded: (1) the simple acute parenchymatous enlargement which not unfrequently occurs at puberty and is unaccompanied by fever or pain; (2) adenitis and cellulitis of neighbouring parts (as in the proconsular neck of severe diphtheria), in which it may be difficult to tell the extent to which the thyroid is also affected; (3) sudden hæmorrhage—extravasation into a cystic thyroid; and (4) malignant disease, especially the soft, quickly growing form, which may be very difficult to differentiate.

Simple thyroiditis in itself is not a dangerous disease, and prognosis for a complete cure is good. Of the non-septic cases in my series all but two recovered, and in only a small minority was there any permanent enlargement of the gland described. Of the 41 cases which are definitely stated to have suppurated 9 died, and the only case in which gangrene supervened was also fatal. In many cases the prognosis will be chiefly influenced by the nature and gravity of the disorder which the thyroiditis complicates. It is also possible that the question of late sequelæ is deserving of greater attention than has hitherto been paid to it.

The treatment of the condition presents no very special features. Any pre-existing disease will, of course, require the exhibition of its appropriate remedies, while rest and the use of local sedatives such as fomentations or leeches will in general alleviate the symptoms. For the dyspnœa tracheotomy is obviously only a last resort, and general sedatives must only be given with caution, as depression of the heart and circulation may involve grave risks.

If suppuration is suspected an exploratory puncture is to be recommended, but a negative result is not to be too implicitly relied on. If suppuration is certain surgical interference should be immediate and energetic. Kocher[3] recommends complete extirpation of the site of the disease—a procedure doubtless preferable in cases of strumitis, but a somewhat heroic method of treatment for cases of suppurating thyroiditis, in which perfectly good results have been reported from simple evacuation and cleansing. Any fistula that may persist will of course be treated on ordinary surgical principles.

While the disease is no doubt uncommon, the question may be raised whether it is not less so than is generally supposed. Congestions in the thyroid gland occur under normal conditions at puberty, menstruation, and pregnancy; a similar phenomenon is well known to occur in animals—for example, in stags during the rutting season. (In this connexion it is interesting to note that in one of my cases an acute thyroiditis occurred in a young girl at the time of her first menstruation, and in two other cases the attack complicated an otherwise normal pregnancy.) Such congestions have at times, though rarely, been known to be so severe as to produce some degree of dyspnœa. They usually quite disappear, but a slight permanent and increasing enlargement may result, with consequent chronic goitre and even degenerative changes and myxœdematous symptoms. And it is stated by Roger and Garnier,[4] who have investigated the pathology of the gland, that in the exanthemata and other acute infections a similar tendency to congestion and inflammation exists. It may well be that in the course of a fever there are secretory disorders in the thyroid as there are in the other glands of the body. Usually, doubtless, the damage is slight and rapidly repaired, but it may not always be so. Many cases of cretinism, infantilism, and myxœdema are said to date from an acute infection. And from the shape and position of the gland it is easy to understand how it may alter considerably in size and yet escape detection; many cases are on record of large goitres which have only been detected by the symptoms they produced. And inflammatory changes may do grave damage without much alteration in the naked-eye appearance of the gland. I have been able to consult one or two authorities on infectious diseases in this country on this point, and they do not seem to have heard or suspected that congestion and inflammation of the thyroid was a common accompaniment of such disorders, and have consequently not been in the habit of looking for it post mortem. But it is possible that if closer investigation were made on this point by those who are in the way of treating large numbers of such cases, the cause might be ascertained of some of the unpleasant sequelæ and developmental disorders which may be associated with zymotic diseases. And it might be hoped that if this were so, a proportion at least of such disorders and of some of the so-called idiopathic cases of infantilism and myxœdema might altogether be prevented or to a large extent alleviated.

West Ayton, Yorks.

[2] Hubert Richardson: The Thyroid and Parathyroid Glands, 1905.

[3] Zur Pathologie und Therapie des Kropfes, Kocher, Deutsche Zeitschrift für Chirurgie, Band x., H. 3 u. 4, 1879.

[4] La Glande Thyroïde dans les Maladies Infectieuses, Presse Médicale, 1899, 31, Roger and Garnier.

GERMAN UROLOGICAL SOCIETY.—With reference to the Congress of this society which will take place in Vienna from Sept. 11th to 13th next and which we announced in THE LANCET of Feb. 18th (p. 428), on account of the death of Dr. Kapsammer, the secretary of the society, Dr. Victor Blum has been appointed provisional secretary, and all communications respecting the Congress should from now be addressed to him at Alserstrasse, 43, Wien, VIII.

HOW FAR CAN THE ABUSE OF DRUGS BE PREVENTED BY LAW?[1]

BY WIPPELL GADD,
OF THE MIDDLE TEMPLE AND WESTERN CIRCUIT, BARRISTER-AT-LAW.

IT is not my purpose to-night to try to prove by the presentation of facts and figures that drugs are abused to an extent almost commensurate with that of their legitimate and profitable use. That I think may be taken as a fact patent to all who have had any opportunity of studying the subject. My object is rather to touch briefly upon the present state of the law in regard to such matters, to indicate how far it deals with them (*a*) theoretically and (*b*) effectively, to consider to what extent it needs strengthening, and in that connexion to refer to laws ruling in other lands and in our own colonies, with the object of suggesting how far we may, with different traditions, methods of life, and habits of thought, adapt to our own use such of them as appear to be wise and practicable.

It is desirable in the first place to define one's terms. What is a drug? By the Sale of Food and Drugs Act, 1875, section 2 (38 and 39 Vict. c. 63), it was enacted that "the term Drug shall include medicines for internal or external use." Now the function of a medicine is, I take it, to correct irregularities caused by disease, and in so far as it is useful for that purpose it is *pro tanto* inimical to normal healthy life. All medicines, that is to say, all drugs, are therefore in a sense poisons, but obviously there is a wide range to their respective toxic powers, and in speaking of the abuse of drugs I shall confine myself to those which are more actively poisonous, although by no means only to those which are scheduled legally as poisons in the Pharmacy Acts. The subject of the abuse of drugs may be divided as follows. 1. Criminal and vicious abuse. 2. Abuses caused by the administration of drugs ostensibly for the relief of suffering and the cure of disease by persons who are not competent to judge of their suitability for particular cases. This may be subdivided into: (*a*) the prescribing of medicine by unqualified persons to sufferers for gain; (*b*) the offering broadcast of reputed remedies for specific complaints—i.e., the sale of nostrums and patent medicines; (*c*) the sale and administration of drugs for complaints which have been self-diagnosed; and (*d*) the unauthorised use of medicines originally prescribed by a duly qualified medical practitioner for a particular patient in a specific state at a certain time.

1. *Criminal and vicious abuse.*—The criminal abuse of drugs is but little restrained by English law. Legislation has been aimed apparently rather at punishing offenders than at preventing offences. By the offences against the Person Act, 1861 (24 & 25 Vict. c. 100), it was made a felony for any person (*a*) to administer to, or cause to be administered to, or to be taken by, any person any poison or other destructive thing with intent to commit murder or to attempt to do any of these things; (*b*) to apply or administer to or cause to be taken by or attempt to apply or administer to, or attempt to cause to be administered to or taken by, any person, any chloroform, laudanum, or other stupefying or overpowering drug, matter, or thing, with intent in any of such cases thereby to enable himself or any other person to commit or with intent in any such cases thereby to assist any other person in committing any indictable offence; (*c*) to unlawfully and maliciously administer to or cause to be administered to, or taken by any other person, any poison or other destructive or vicious thing so as thereby to endanger the life of such person, or so as thereby to inflict upon any person any grievous bodily harm; (*d*) to unlawfully and maliciously send or deliver to or cause to be taken or received by any person any dangerous or noxious thing with intent to do some grievous bodily harm; and (*e*) for a woman, being with child, with intent to procure her own miscarriage, to unlawfully administer to herself any poison or other noxious thing, and for any one with intent to procure the miscarriage of any woman, whether she be or be not with child, to unlawfully administer to her or cause to be taken by her any poison or other noxious thing; and a misdemeanour to (i) unlawfully and maliciously administer to, or cause to be administered to, or taken by, any other person, any poison or other destructive or noxious thing with intent to injure, aggrieve, or annoy such person; or (ii) to unlawfully supply or procure any poison or other noxious thing knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, whether she be or be not with child.

The question as to what is a poison or noxious thing was discussed in R. *v.* Cramp (1880), 5 Q.B.D. 307, some earlier cases, R. *v.* Perry (1847), 2 Cox 223; R. *v.* Isaacs (1862), 9 Cox 228; and R. *v.* Hennah (1877), 13 Cox 547, being considered and reviewed. It would seem that the question is one of fact, it being essential to show that the substance was noxious in the amount used in any particular case. In none of these cases is there any prohibition of the sale of poisons or noxious substances by persons having no guilty knowledge of the unlawful purposes for which they are procured. Indeed, I know of but one English Act which prohibits the sale of poisons—viz., The Poisoned Grain Prohibition Act, 1863 (26 and 27 Vict., c. 113), by Section 2 of which it was enacted that—

> Every person who shall offer or expose for sale or sell any grain, seed, or meal which has been so steeped or dipped in poison, or with which any poison or any ingredient or preparation has been so mixed, as thereby to render the same poisonous and calculated to destroy life, shall in either case for every such offence upon summary conviction, as hereinafter provided, forfeit any sum not exceeding ten pounds.

I do not forget the Arsenic Act or the Pharmacy Acts of 1868 and 1908, but they allow even scheduled poisons to be sold to anyone known to the seller after due performance of certain rites and ceremonies connected with the Poisons Register which sellers have to keep. Far be it from me to doubt the usefulness of the Poisons Register; it is the opinion of those qualified to judge that even in the case of intended suicides the difficulties placed in the way of the person seeking to obtain the poison often sufficiently disgust him to turn what is probably the ill-defined purpose of an unbalanced mind. In the case of intended murder the Poison Register is not likely to act as a deterrent, its chief use being as an aid to subsequent detection and conviction.

With regard to accidental poisoning, the difficulties of obtaining an article, accompanied as such sales very often are with words of advice and warning from the specially qualified person who can alone sell scheduled poisons by retail, often effectually impress the purchaser with the dangerous nature of the substance which he proposes to use, and thus mishaps are prevented. But the weakness of the existing schedule is its want of elasticity. It contains only certain definitely named substances and classes of substances. Whilst expressly including all poisonous vegetable alkaloids it does not embrace synthetic substitutes for alkaloids of equal or greater potency, as, for example, eucaine, novocain, and stovaine. Again, whereas sulphonal is specifically included, similar hypnotics, such as veronal, trional, &c., are outside the schedule. It is true that there is power given to the Privy Council, acting at the suggestion of the Pharmaceutical Society, to add from time to time to the schedule, but there seems a strange reluctance on the part of the Privy Council to exercise this power. For example, in spite of the fact that representations have been repeatedly made concerning the use of diachylon (lead plaster) as an abortifacient, the Privy Council has declined to put it upon the schedule. Phosphorus has been the cause of many deaths, but the one answer to representations that it should be put on the schedule appears to be "matches"—a consideration of domestic convenience which has lost what little force it ever had by the prohibition of manufacturing, selling, and importing matches made with white phosphorus by the White Phosphorus Act, 1908 (8 Ed. VII., Chapter 42), which came into force on Jan. 1st, 1910.

I believe that in other countries, and in some of the American States, there is more elasticity in such schedules; thus, speaking from memory, the Poison Schedule of the State of Michigan, U.S.A., contains a provision to the effect that any drugs, the medicinal dose of which, as stated by medical authorities, is not more than some few grains, becomes *ipso facto* a scheduled poison. Nor is this a new idea, for as long ago as 1682 Louis XIV. of France issued a decree forbidding apothecaries to sell "arsenic, sublimate, *or any drug reputed to be a poison*, except to persons known to them, who should sign the register declaring the purpose for which they were buying the poison."

I submit that an addition might well be made to the English Schedule to the effect that any drug, the maximum

[1] A paper read before the Medico-Legal Society on March 21st, 1911.

medicinal dose of which is stated by the makers thereof, or by competent medical authorities, not to exceed two grains for an adult, should be considered a poison within the meaning of the Pharmacy Acts. But the schedule is practically useless as a means of restraining the vicious abuse of drugs, that is to say, their excessive use by victims of drug habits. For such, in most civilised countries, and particularly in the United States of America, there are prohibitive laws.

The time at my disposal in preparing this paper and the difficulty of access to primary sources of information prevent my giving you a summary of these; but some examples, taken almost at random may suffice to illustrate the point. Thus in 1910 a French pharmacist was fined £40 for delivering morphine without a regular prescription. In 1908 a Berlin druggist was fined £25 with the option of 50 days' imprisonment for selling morphine to a lady, in addition to being sued by her husband for damages. In the *Chemist and Druggist* of Nov. 27th, 1909, it was stated that—

> The laws restricting the sale of narcotics are becoming more and more severe in the United States. It has been customary to make sales by pharmacists only on physicians' prescriptions, but now a Iowa statute forbids the dispensing of prescriptions unless they are presented in person by the physician who wrote them, and unless the physician also signs the poison register.

In Germany the repetition of prescriptions for internal use containing chloral hydrate, chloral formamide, morphine, heroin, cocaine or their salts, preparations of ethylene, amylene hydrate, paraldehyde, sulphonal, trional, urethan, or veronal, is forbidden unless the prescriptions bear the date and the renewed signature of a qualified medical practitioner. In Austria it is forbidden to dispense any prescriptions which are copies of original prescriptions. In Hungary, in the case of potent drugs, distinguished in the Pharmacopœia by having two crosses against the title, a new prescription calling for one of these as an ingredient must be written out for each supply, and such prescriptions must be made up within 48 hours in places provided with a pharmacy, otherwise within four days. In Norway pharmacists are forbidden to supply certain powerful drugs except on the prescription of authorised medical practitioners, a list of whom has to be kept in every pharmacy. Similar rules exist in Russia.

In the British dominions only the legislature of Alberta controls the sacred right of British subjects to obtain what poison they wish, and that only since Dec. 16th last, when a new Pharmacy Act became law, enacting, *inter alia*, that no one may sell by retail the alkaloid cocaine or its salts, alpha or beta cocaine or their salts, or any admixture of cocaine or eucaine except upon the written prescription of a legally qualified medical practitioner. The prescription is to be retained by the retailer and not filled more than once, and no copy may be given.

In the case of scheduled poisons the fact that their sale is restricted to qualified pharmacists is, of course, a great safeguard. Pharmacists are by their training and experience essentially cautious, and the standard of education, intelligence, and high principle amongst them was never so high as it is to-day. But to distinguish purchasers of drugs for legitimate uses from those who seek them for illicit ends is always invidious and often impossible, and the authorised dealers would doubtless welcome legal restrictions which would enable them to take up a *non possumus* attitude.

2 (*a*). *Unqualified prescribing.*—The only statute directly restricting unqualified practice in this country is the Apothecaries Act, 1815 (55 Geo. III., c. 194), Section 20 of which prohibits persons who are not legally qualified as medical practitioners from acting or practising as apothecaries. What is acting as an apothecary is not defined, but has been considered in a series of cases. The element of doubt is chiefly in regard to what is sometimes called counter-prescribing by pharmacists. If an examination of the patient be made, followed by the prescribing and supplying of a remedy, there would seem to be no doubt that a technical offence at least is committed, but it is not so clear whether suggesting a remedy for a self-diagnosed complaint is acting as an apothecary. If it be so, it is doubtful whether it would be good public policy to strictly enforce the Act. "The best," said a wise man, "is the enemy of the good," and counsels of perfection have sometimes strange results when applied to faulty human affairs.

Under present conditions the alternative to seeking the advice of a vendor of repute with a character to lose is usually the swallowing of both the advice and the nostrum of an anonymous medicine-monger, probably resident on the other side of the Atlantic, and certainly immune to any form of moral suasion. For the quack blatant there should be no consideration; for his case the prescription contained in the Penal Code of Brazil, combining as it does pecuniary penalties with opportunities for reflection, would seem well suited:—

> For exercising medicine in any of its branches, dentistry or pharmacy; for practising homœopathy, midwifery, and hypnotism or animal magnetism, without being licensed according to the laws and regulations:—Penalty: Solitary confinement for one to six months and a fine of 100,000 reis to 500,000 reis.

2 (*b*). Briefly I would submit some considerations concerning the sale of nostrums and patent medicines. Here again it is not necessary to present the facts, he who runs must read, and if he takes refuge in a railway train, too often the cinematic landscape which unfolds before him makes the same appeal to his valetudinarian fancies and morbid anxieties as to his physical well-being.

The law allows anyone to manufacture and put up for sale medicines for human use, and to label them with such fantastic virtues as a vivid imagination may suggest, provided only that if in the exuberance of his verbosity the proprietor claims either that his preparation will cure disease or that he and he alone knoweth the secret of its composition, he is taxed to the extent of some 12½ per cent. of the value he puts upon his remedy, with the compensating advantage of receiving an official acknowledgment which to the illiterate seems to lend authority to audacity.

For the retailing of stamped medicines a licence is required, but seeing that such can be obtained for 5*s.* per annum, there is practically no restraint on the vending of them.

Proprietary articles containing scheduled poisons are subject to the provisions of the Pharmacy Acts (*vide* Pharmaceutical Society *v.* Piper, (1893) 1 Q. B. 686), Pharmaceutical Society *v.* Armson, (1894) 2 Q. B. 720). Very few proprietary articles are the subjects of letters patent, the Pharmaceutical Society having on many occasions secured the revocation of patents for medicines containing scheduled poisons, great weight being paid by the Chancery courts to the argument that the effect of the patent would be to enable the patentee to sell without restriction an article which, if not protected by letters patent, could not thus be sold.

Stamp duties on medicines are governed by the Acts 42 Geo. III., c. 56; 44 Geo. III., c. 98; and 52 Geo. III., c. 150. The exemptions are as follows:—

1. All medicinal drugs whatsoever, whether recommended or not, which shall be uttered or vended entire without any mixture or composition with any other drugs or ingredients (52 Geo. III., c. 150). Such substances are only exempt from liability to stamp duty when sold by a chemist and druggist, surgeon, or apothecary, or by a person holding a patent medicine licence. Other persons selling entire drugs unstamped are not entitled to this exemption.

2. Ginger and peppermint lozenges or any other article of confectionery, unless the person vending the same shall vend them as medicines or as beneficial for the prevention, cure, or relief of any distemper, or ailment, or disorder incident to or in any wise affecting the human body (55 Geo. III., c. 184).

3. All artificial mineral waters and all waters manufactured with soda or mineral alkali or with carbonic acid gas and all compositions in a liquid or solid state to be used for the purpose of compounding or making any of the said waters (3 & 4 Will. IV., c. 97).

4. Preparations known, admitted, and approved of as remedies when sold by chemists and druggists, surgeons, or apothecaries, provided always that the vendor does not (*a*) claim or possess any occult secret or art in mixing the preparation; (*b*) claim or possess any exclusive proprietorship; (*c*) issue the preparation under letters patent; or (*d*) recommend the preparation as a nostrum or specific.

It is the last of these exemptions to which I wish to direct your attention. For many years it remained a dead letter until the question of its applicability was raised in the case of Farmer *v.* Glyn-Jones, which was decided in favour of the defendant both by the magistrate and on appeal (1903 K. B. 2, p. 6). Following on this decision the Board of Customs and Excise has laid down the following main lines upon which to base its procedure: A preparation is regarded as known, admitted, and approved (1) if the label bears a

statement of the ingredients of the medicine or adequate indication of the active ingredients; or (2) if the medicine is prepared according to some well-known book of formulæ and the name of such book or initials denoting it, followed by a number for the ready identification of the particular formula, are stated or indicated on the label. The onus of proving that the composition of a preparation sold accords with the assertion made or implied on the label rests with the vendor who claims the exemption. Since this decision it has been the practice of pharmacists to sell remedies for specific complaints without stamps under cover of this exemption, the active ingredients being indicated on the label or the source of the formula denoted by initials or numbers.

Is it not possible that in some amendment or rather extension of this practice there may be found the germ of a possible solution of the vexed question of proprietary articles and secret remedies? It is futile to ask, in the present state of public opinion, even if it be desirable, for prohibitive or drastically restrictive legislation. The British public dearly loves cure-alls exhibited in bottles. The spread of education which it might have been hoped would have cured this propensity seems but to have provided further avenues for advertising exploits and the means of reaching a wider public as willing to be gulled as their more illiterate forbears. Sensational exposures are soon forgotten, especially if they come from an apparently interested quarter.

The recent work published by the British Medical Association on "Secret Remedies," although admirably conceived, is, I would submit with great respect, imperfectly carried out. Too much stress is laid upon the bare cost of the alleged ingredients of the nostrums dealt with. To a sick man seeking health it matters but little whether he who brings him relief finds a substantial pecuniary recompense for doing so or not. Moreover, the difficulty attendant on the exact analysis of organic vegetable mixtures makes it easy for the manufacturer to repudiate as incorrect a formula based on the work of the analyst alone. But why should not the onus be laid on all manufacturers putting forth claims to cure disease of stating the composition or at least the active ingredients of their preparations in some such way as is already done by those who seek to evade the incidence of the Stamp Duty? Such manufacturers would still retain their common law rights as regards protection against passing off—that is to say, other traders, although they might be able to make preparations from the same formula, would be restrained from any action which would deceive purchasers into thinking that they were obtaining an article actually made by the original introducer. Medicines for which a genuine originality could be claimed might, of course, be made the subject of letters patent.

I am quite aware that legislation on such lines would be strenuously opposed, but is it not called for in the interests of public health and morality, and is it beyond the wit of Parliamentary draughtsmen to frame some Bill which would protect the public without doing serious injury to interests which have become vested by long user?

In cases in which absolutely false statements are made legislation should proceed on more drastic lines. In this connexion we may usefully imitate the Quackery Prevention Act, 1908, of New Zealand, the operative clauses of which are as follows:—

2. Every person commits an offence who publishes or causes to be published any statement which is intended by the defendant or any other person to promote the sale of any article as a medicine, preparation, or appliance for the prevention, alleviation, or cure of any human ailment or physical defect, and which is false in any material particular relating to the ingredients, composition, structure, nature, or operation of that article, or to the effects which have followed or may follow the use thereof.

3. A statement shall be deemed to be published within the meaning of this Act if it is inserted in any newspaper printed and published in New Zealand, or is publicly exhibited in view of persons in any road, street, or other public place, or is contained in any document which is gratuitously sent to any person through the post office or otherwise, or which is gratuitously delivered to any person or left upon premises in the occupation of any person.

4. Every person who commits an offence against this Act is liable, on summary conviction before a magistrate, to a fine not exceeding one hundred pounds in the case of a first conviction for any such offence, and not exceeding two hundred pounds in the case of a second or any subsequent conviction.

5. If any person causes any statement to be inserted in breach of this Act in a newspaper printed and published in New Zealand, the printer, publisher, and proprietor of that newspaper shall severally (and without excluding the liability of any other person) be deemed to have published that statement in breach of this Act, and shall be liable for an offence against this Act accordingly.

2 (*c*). *The sale and administration of drugs for complaints which have been self-diagnosed.*—A modern ill of rapidly increasing virulence is the habit of persons, often of good general education, but with little or no scientific, still less medical, training, purchasing and taking potent drugs for morbid conditions, real or imaginary, from which they are suffering or suppose themselves to be suffering.

The practically unrestrained access to hypnotics and analgesics and other potent medicaments fosters this abuse, although not often to so rapidly fatal an end as in the recent case of a member of the legal profession in Cornwall, who is alleged to have had a vivid appreciation of the convenience of medicines hammered into small bi-convex shapes and an absolute ignorance that corrosive sublimate in this form was not meant for internal consumption.

Here I can but reiterate my plea for the extension of the poisons schedule, so that it may include all powerful drugs, but apart from legislative action, could not medical men be induced to revert to the good old custom of prescribing in full Latin and technical terms rather than by popularly understood and readily recognised synonyms, the latter practice being calculated to fatally familiarise the public with the names of drugs without enlightening them as to their toxic power?

Lastly and briefly, the abuse of drugs by the unauthorised use of medicines originally prescribed by duly qualified medical practitioners for a particular patient in a specific state at a certain time. The question of the repeated dispensing of medical prescriptions which are often used long after their original purpose has been served, handed to friends, and perchance, if nauseous, to enemies, and even treated as heirlooms, is one of some difficulty. The whole question of the ownership of such prescriptions was discussed at length in THE LANCET of Oct. 1st, 15th, and 22nd, and Nov. 12th of last year, the conclusion arrived at being that the prescription was the property of the patient who had received it in return for a fee, and that the only restraint on its undue repetition was by an honourable understanding between physicians and pharmacists, any breach of which should be treated rather as a violation of professional etiquette than as a legal offence.

It would be impossible for me to acknowledge all the sources of information which I have used in preparing this paper, but I must mention the *Pharmaceutical Journal*, Mr. Glyn-Jones's work on the "Law of Poisons," and particularly my indebtedness to the editorial staff of the *Chemist and Druggist* for the trouble they have taken in obtaining, at my request, information concerning the legislation of other countries.

AN UNUSUAL CASE OF BULLET WOUND OF THE SKULL.

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AT Meerut, India, on Feb. 15th, 1910, one of the syces of the 31st (D.C.O.) Lancers was cutting grass in a field situated about one mile behind the rifle range. Musketry practice was going on at the time, and firing was taking place from the 1000 yards firing point. Some other men who were cutting grass in company with him said that they heard a sound of something rushing through the air, and immediately afterwards the man dropped to the ground unconscious and with a wound in his head. As the man was about one mile, or say 1800 yards, behind the butts, and the bullet which struck him was fired from a point 1000 yards in front of the target, he must have been hit from a range of at least 2800 yards, which is the extreme range up to which the new short rifle is sighted.

On admission to hospital the patient was conscious, but soon afterwards he became drowsy and could be roused only with difficulty. The pulse was slow, the pupils were moderately dilated, and the corneal reflex was present. No paralysis was noted at the time. There was an oval wound in the left side of the head about 1¼ in. above the upper margin of the ear. The patient was anæsthetised and a flap was turned down including the wound. On clearing the bone an oval opening was found in the left temporal bone about one inch long and three-quarters of an inch broad. It was found possible to remove the comminuted bone from

this without enlarging the opening. The dura mater was found to be uninjured. The bullet could not be traced, and after unsuccessful exploration with the finger and a probe the search was abandoned and the wound was stitched up. Consciousness had returned by the next day, but the patient was very drowsy and complained of severe pains in the left side of the head. The temperature was 100° F., and there was a bloody discharge from the left ear. There was no paralysis, and the pupils were equal and reacted normally to light. The temperature was normal on the third day and the patient was quite conscious, but still complaining of severe pain in the left side of the head. The discharge from the left ear was now becoming purulent. About the fifth day partial left-sided facial paralysis set in and at the same time the patient began to experience difficulty in opening his mouth. Pain in the head was persistent and there was also pain in the left temporo-maxillary articulation. The discharge from the left ear had now become purulent and the bleeding had ceased. A skiagram was taken and the bullet was found to be lying in the horizontal line of the middle ear.

I took the case over on April 10th, 1910, and found the conditions to be as follows. The man seemed dull and stupid and his speech was slow and blurred, though I attributed this to his deafness and facial paralysis rather than to any cerebral condition. There was no paralysis or weakness of the limbs, and sensation and the reflexes were normal. There was complete facial paralysis, with wasting of muscles on the left side. Deafness in the left ear was absolute, though I could not determine whether or not bone conduction was present, investigations of this kind being very difficult in uneducated natives. There was a purulent discharge from the left ear, the pus being of a leaden colour. Examined with a speculum the membrane was found to be destroyed, and deep in the tympanum a shining metallic body was seen. On passing a probe and touching this it was evident that it was the bullet. The right ear was normal in all respects. The patient was unable to open his mouth more than half an inch and complained of pain in the left temporo-maxillary articulation and in the left side of the head. The other cranial nerves were normal. The scar in the temporal region was not tender. Another skiagram was taken and the presence of the bullet was confirmed; it was lying apparently in the middle ear.

Operation was performed on May 9th under chloroform anæsthesia. The usual incision for the radical mastoid operation was made, the flap was turned forward, and the bone was cleared. The bone was then gouged away at a rather higher level than is usually done in approaching the mastoid antrum, with the object of opening the temporal fossa. The temporal fossa was reached about half an inch below the surface. The dura mater was thickened and covered with granulation tissue, but the intra-dural pressure appeared to be normal. The cartilaginous meatus was now detached and a meato-conchal flap was formed. After removing some of the bone of the posterior meatal wall the tympanum came clearly into view with the bullet lying in it. The removal of bone was now proceeded with, working upwards, forwards, and inwards, until a good-sized opening into the temporo-sphenoidal fossa had been made. The end of the bullet could now be seen and about half of its length. After enlarging the opening a little more sufficient room was obtained to extract the bullet. It then appeared that the bullet had entered through the squamous portion of the temporal bone, passed vertically downwards between the bone and the dura mater, and finally lodged in the petrous portion of the temporal, with the posterior end in the temporo-sphenoidal fossa, the body wedged in the tympanum almost vertically and the point protruding into the glenoid fossa. The posterior wound was closed and the tympanum was plugged through the meatus.

The subsequent course of the case was uneventful. The temperature was normal next morning. The discharge from the meatus was profuse for a few days, but had lost its former leaden colour; it became less day by day and the packing of the tympanum was discontinued about a fortnight after the operation. A week later the discharge had totally ceased. The external wound healed up satisfactorily. The trismus improved daily, and three weeks after the operation the patient could open his mouth wide and could eat ordinary food. The headache continued for about a fortnight after the operation, becoming gradually less, and then it ceased altogether.

As regards the facial paralysis and the sense of hearing, I am unable to state exactly how much improvement took place, as I went on leave about three weeks after the operation, and on my return two months later I found that the patient, as usually happens in India, had left the hospital of his own accord during my absence, and all trace of him had been lost. Three weeks after the operation there was no improvement, but I was told that subsequently both the facial paralysis and the hearing improved decidedly. From the fact that the facial paralysis developed some days after the injury it seems almost certain that the lesion of the nerve must have been due to inflammatory effusion and not to severance, which renders it likely that some degree of recovery would eventually take place.

The interest of this case lies in the direction and character of the wound produced by the bullet. The track of the bullet showed that, at the time the man was struck, it was falling almost vertically. Now the new short rifle is sighted up to 2750 yards, but if the rifle be elevated to an angle of 35° with the horizontal, the bullet will travel 3500 to 4000 yards, and in the latter part of its trajectory will be falling almost vertically under the influence of gravity, the propulsive power of the charge being at this point practically all spent.

Lodgment in the skull generally occurs in the case of wounds inflicted by spent bullets, and the fact that this bullet entered the skull without apparently penetrating the dura mater shows that the momentum of the projectile was at the time very small. For these reasons I think that the range at which the man was hit was underestimated, and that he was probably about 3500 yards in front of the firing point, and not 2800 as I was informed. I have not access to any literature on the subject, but I think that penetration of the skull and lodgment without injury to the dura mater or brain must be almost unique, and therefore I put the case on record.

For the notes on the earlier history of the case I am indebted to Captain W. H. Riddell, I.M.S.

Jubbulpore, India.

THE EYE OF SURGICAL NEEDLES: A NEW FORM.

BY J. LYNN THOMAS, C.B., F.R.C.S. ENG.,
SURGEON TO THE CARDIFF INFIRMARY, ETC.

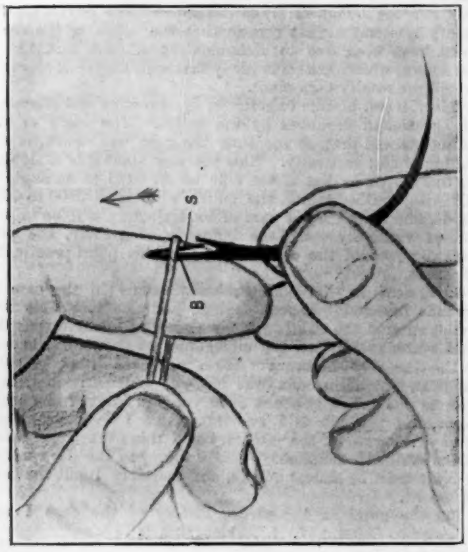
I HAVE had surgical needles made for me by Messrs. Shrimpton and Fletcher of Redditch with the new eye I devised for ordinary needles some three years ago, and I have found them in practice to answer the purpose for which they were invented. The ideal requirements of an eye of a needle are not to be found in the needle, which has been in general use from the dawn of the bronze age, and which has not been materially altered for many thousands of years. Many special eyes and special needles have been made during the last few years for surgeons and for blind people, but none of them, in my opinion, possess the following necessary essentials of an ideal eye: (1) ease and simplicity in threading the eye; (2) means of fixing the sewing material in the eye to prevent it slipping when used single; and (3) ease of unthreading. Does any existing eye meet these requirements?

I have used for many years the following needles:—1. The "Kratz" or calyx-eyed needle: the frequent slipping of the thread is its annoying drawback. 2. The "Reverdin" needle I have found extremely handy for certain work, but one must work with a trained assistant in order to get the advantage in speed over that of an ordinary eye. 3. The "Doyen" eye: I have found the field for its use too limited owing to its large size, and, also, to the *rigid* sides of the tapering lance-shaped eye not allowing gripping of the silk or thread. 4. The "Paterson" eye meets all the essentials of an ideal eye, but it retains the drawbacks of the antique process of "threading the needle." Every other variety of eye which I have tried, such as the lateral slot-eye or "side entrance spring-eye," possesses either a positive disadvantage over the ordinary eye or an improvement which I am quite unable to appreciate.

The eye to which I draw attention has not only a novelty in construction, which will be easily appreciated from the

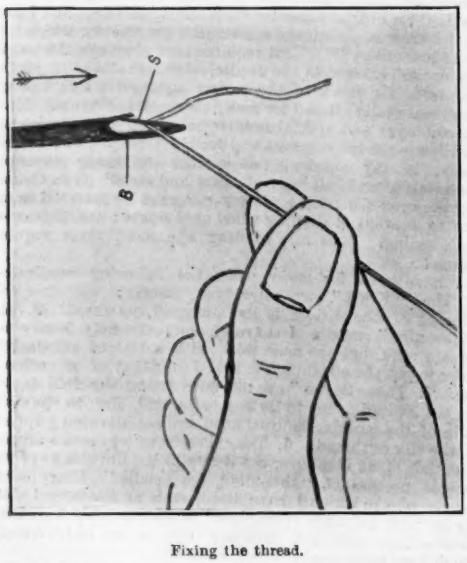
accompanying illustrations, but the method of threading the needle, which I find to be the best (see Fig. 1), perhaps ought to be described as "needling the thread," because the part played by the thread in the process is absolutely passive, which is a reversal of the part taken by the thread in the ordinary course of "threading the needle." A further description of the eye is superfluous on account of the illustrations, except perhaps to summarise it as possessing "a side entrance" with a "spring-grip," and to state that the projection against which the spring is checked is made prominently enough to be felt by emmetropes and the blind. The vanishing point between the spring S and the diminutive part of the body of the needle B allows any size of thread to be firmly gripped between S and B, which can enter the "side entrance."

FIG. 1.



Picking up the thread.

FIG. 2.



Fixing the thread.

The makers have made for me ten different sizes of needles with special forms for skin and hernia operations, and also some with Mr. Moynihan's curve, which have pleased me much both in closing deep incisions and in restoring abdominal wounds to their normal stratified condition. The arrows in the illustrations indicate the direction of the movements of the *needle* in "needling the thread," Fig. 1 in picking up the thread, and Fig. 2 in fixing it.

Cardiff.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTES ON A CASE OF MALIGNANT SYPHILIS.

BY W. FINGLAND, L.R.C.P. & S. EDIN.

ON Dec. 2nd, 1908, I was consulted by a man, aged 51 years, who three weeks previously had contracted syphilis, and exhibited a primary sore on the corona glandis, associated with well-marked inguinal adenitis. Mercurial treatment was commenced at once—pil. hydrargyri gr. i., ferri sulph. exsiccati gr. ii., in pill. Six weeks thereafter secondary symptoms made their appearance by a pustular eruption, very generally distributed, but more plentiful on the scalp, nape of neck, and face, which simulated very closely discrete variola. Recognising that the case was one of more than ordinary severity, I instituted a series of inunctions of mild mercurial ointment with an excellent result, the eruption disappearing, excepting on some parts of the neck and scalp. The fauces and mouth were unaffected, but an acute periostitis of the anterior half of the hard palate occurred, resulting in the necrosis of the alveoli, with the loss of two right upper incisors. This condition was treated locally with carbolic acid and camphor, equal parts. An eruption of a bullous character now appeared, with considerable destruction of tissue, sparsely distributed on the scalp, face, upper and lower limbs, which was followed by a rupial eruption which covered the shoulders, back, buttocks, and left arm. This latter eruption was very copious, the rupial crusts also being as large as a florin, many of which were necrotic and hæmorrhagic. The crusts were removed by the local application of warm carbolic oil and the sites thereof with unguentum hydrargyri subchloridi. This treatment was carried out by a trained nurse and occupied several weeks. The general health of the patient now began to be so seriously affected that specific treatment had to be suspended and measures of a restorative character resorted to—Ferri et ammoniæ citratis gr. x., liq. strychniæ ♏v., infusi calumbæ ℥ss.; and later Robin's glycerophosphate syrup. He gradually began to improve in health, and after a few weeks of change of air and rest was able to resume work. Hydrargyri biniodidi gr. ⅛ thrice daily, with potassii iodidi ℥ss. at bedtime, was prescribed, which was replaced latterly by intramuscular injections of iodipin.

On June 27th, 1909, I saw the patient at his lodgings, and was informed that he had experienced great difficulty in returning home that day. His sight and speech were affected, with paresis of both lower extremities. These symptoms becoming worse, he was removed to hospital. The patient gradually lapsed into a state of profound coma. Sight, speech, and hearing were lost; paralysis of both lower extremities became complete, with retention of urine. He remained in this condition, dying 12 days after admission to hospital, and seven months after the appearance of the primary lesion.

Necropsy.—The following is a summary of the post-mortem examination report. "Brain: Macroscopically there was a patch of recent hæmorrhagic encephalitis in the pons below the aqueduct of Sylvius. The membranes appeared to be normal. Microscopically there is thrombosis of some of the intracerebral vessels, with a large area of hæmorrhage in the brain substance, which is not of very recent origin, on account of the presence of blood pigment. The perivascular sheaths of some of the intracerebral vessels are infiltrated with small

round cells. Sections of the meninges on the surface of the brain show extensive round-cell infiltration, and some of the vessels are obviously diseased, and contain strands of material suggesting commencing organisation. The vessel walls, together with patches of the surrounding tissue, are the seat of caseous degeneration, most probably a gummatous arteritis. Liver normal. Kidneys: commencing degeneration of secreting tubules. As far as can be ascertained, the hæmorrhagic encephalitis might be regarded as an infarction secondary to the occlusion of some of the larger cerebral vessels on the surface of the meninges by microscopic gummata."

The principal points in the case are: (1) The serious character of a specific lesion in middle life; (2) the severity of the secondary eruptions; and (3) the early onset of cerebral symptoms.

Liverpool.

NOTE ON A CASE OF MELANOTIC SARCOMA PRIMARILY AFFECTING THE ORBIT, WITH SECONDARY DEPOSITS IN LIVER, PLEURÆ, AND LUNGS.

BY B. C. A. LEEPER, L.R.C.P. & S. IREL., L.M. (ROTUNDA),
ASSISTANT MEDICAL OFFICER, EARLSWOOD ASYLUM.

THE patient, a man aged 60 years, single, was admitted on Sept. 25th, 1906. The family history was unimportant and the previous history showed that the left eye was enucleated a year before admission on account, his friends said, of a "swelling." No history of syphilis, alcoholism, or insanity. On admission the patient was well nourished and developed. The heart and lungs were normal, as were also the abdominal organs. The urine, of specific gravity 1020, acid, contained a slight trace of albumin. Mentally the patient was very lost and confused. He sat about by himself all day and talked to himself; he was untidy in his habits. He remained in this condition till Dec. 21st, 1908, during which time a growth had again appeared in the left orbit. Up to this time he had never complained of any feeling of discomfort. In February, 1909, he complained of feeling unwell, and on examination was found to have the parotid and sublingual glands enlarged, also the growth in the eye commenced to trouble him, especially at night. The urine was very dark and gave the reaction for melanin. His appetite was very poor and he developed symptoms of secondary deposits in the lungs. Death took place on March 3rd, 1909.

Necropsy.—A post-mortem examination was made two days later, the temperature being 54° F. Cadaver of elderly man. Very emaciated; lividity and rigidity marked. Tumour the size of a Tangerine orange protruding from left orbital cavity. Parotid gland of same side enlarged. Calvarium: orbital walls of left side eroded and brittle. Dura mater thickened and studded all over with punctiform hæmorrhages. Pia and arachnoid thickened and congested. Brain substance healthy. Ribs: Very little cancellous tissue present. Pleuræ covered all over with small black nodules. Lungs: whole substance of both covered with small black nodules identical with those on pleuræ. Heart degenerated and covered with fat; valves competent. Liver enormously enlarged and projecting into thorax. Surface very hard and tough. Large nodular masses of a deep black colour on the surface and through substance. Liver weighed 8 lb. 12 oz. Suprarenals and kidneys were all studded over with fine black projections. Large quantity of brownish fluid in abdominal cavity. From orbit was removed a tumour weighing 8 oz., encapsuled in a sac which was filled with a gelatinous substance of a deep black colour, which had a putrid smell. Microscopical examination showed the presence of a spindle-celled sarcoma.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—This institution has acquired a site in Judd-street, the lease of its present buildings in Gray's Inn-road being on the eve of expiration, and building operations have been begun. In addition to the £12,000 in hand, a further sum of £5000 will be required to complete the building.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

The Electro-cardiographic Method.—Suffocative Catarrh.

A MEETING of this section was held on March 28th, with Sir WILLIAM ALLCHIN in the chair.

Dr. THOMAS LEWIS (University College Hospital Medical School) read a paper on the Electro-cardiographic Method and its Relationship to Clinical Medicine. He said that the latest development of the galvanometer method was the new "string galvanometer" of Einthoven. It was an instrument which, on account of the quickness of its response, its sensitivity, and the ease with which it was managed, was rapidly superseding all other instruments of its class. It consisted of a powerful electro-magnet, the separate poles of which were closely approximated, and left between them a narrow chink. In the chink an extremely fine fibre (of platinum or silvered quartz) was suspended. The principle of the instrument was simple. An electric current was passed through a conductor lying in a magnetic field; conductor and magnet reacted upon each other; and if one system was fixed and the other was moveable, the latter (the moveable system) was deviated in a definite direction. In the string galvanometer the magnet was fixed, the string was slack and flexible; the string was the moveable system, and it deviated when a current was passed through it. The quickness and sensitiveness of the instrument depended upon the lightness of the fibre and upon the strength of the magnetic field. The strength of the magnetic field of the string galvanometer and the lightness of the fibres were such that accurate measurements might be made of very minute currents. When the instrument was properly adjusted the deviation of the string was directly proportionate to the strength of current passed into it. An estimate of the practical value of a single method of physical examination was at no time easy, and it was especially difficult when they dealt with a method which was still in its infancy. In offering his own impressions of the relationship of the electro-cardiographic methods to the practice of medicine it was to be understood that he gave them as they appealed to him at the present time and after three years' study. He thought he should do wisely if he placed in the foreground, not the method itself, but the general conclusions which had been arrived at as a result of its employment, confining attention to those facts which had an immediate influence upon their conceptions of pathological conditions. Regarded from that point of view, their attention concentrated at the present time upon two conditions, which were usually referred to as delirium cordis and paroxysmal tachycardia. As a result of investigations carried out with the galvanometer, they were now in a position to assert in the most positive fashion that what had been termed in the past delirium of the heart was, in fact, a condition known to experimentalists by the name "fibrillation of the auricle." The clinical importance of recognising that disorder of the cardiac mechanism could scarcely be exaggerated; it was directly accountable for 50 per cent. of all irregular pulses as they were encountered in a general out-patient department, and for an even higher percentage in the wards of a general hospital. In patients who were the subjects of heart affections attributable to a rheumatic infection, and in elderly patients who succumbed as a result of progressive sclerotic myocarditis, the final break-down was often, if not generally, heralded by the onset of that curious, distinct, and easily recognisable mechanism. The importance of identifying it was obvious, not only on account of its universality, its profound influence upon the life-history of the heart affected by it, but equally because, being a mechanism *sui generis*, it reacted to cardiac drugs in a specific manner. It was not the place in which to refer to the disorder in greater detail, but only to emphasise the imperative need of an acquaintanceship with the condition, and to claim for the galvanometer its final isolation and analysis. He passed to the second condition—namely, paroxysmal tachycardia. Formerly it was

regarded as of obscure origin and frequently attributed to an affection of the cardiac nerve trunks or their connexions. They possessed clear evidence that cases which fell within that category might be placed in several distinct classes. Of these classes two were peculiarly striking. In the one the paroxysms of tachycardia consisted of temporary crises of auricular fibrillation. They were paroxysms of rapid heart action in which the ventricular beats followed each other irregularly. In the other the paroxysms depended upon the awakening of new impulse formation in the heart musculature, and from a point removed from the normal seat of impulse formation. It had been ascertained that the attack was the result of a temporary dislocation of the site of the *primum movens;* or as it might perhaps be more correctly expressed, it was caused by the extinction of the rhythm of the normal pace-maker and the development of a new and more rapid rhythm in a point some distance removed from that which originated the normal rhythm. For the elucidation of those facts they were indebted to the new method. And it might be stated in parenthesis that their knowledge of the actual site of origin of the normal mammalian heart rhythm was largely referable to the same source. The normal rhythm of the heart arose, as they knew, from a small area of the right auricle immediately abutting upon the entrance of the superior vena cava. He had placed those additions to their general knowledge in the forefront of the account rendered by the galvanometer because they must necessarily and immediately modify their conception of, and their attitude towards, many clinical conditions, and because they formed additions to the chapter of cardio-vascular pathology which they could ill afford to neglect. Even a summary perusal of the multitude of the newly acquired facts, furnished by the instrument, had been impossible in the time at their disposal, and in that summary those isolated examples had been stressed not only because he was in a position to speak with a first-hand knowledge of them, but because they appealed to him as constituting generalisations which could not fail to receive general clinical application in the near future. In an outline of general conclusions they could not lose sight of its important bearing upon other and more strictly clinical methods of examination. It might be stated that the galvanometer had already substantiated the great bulk of the facts previously acquired by means of the polygraph. It was true that at times conclusions at variance with previous conceptions were reached, but the point which should be specially emphasised was that the galvanometer showed in the most unequivocal manner that they were fully justified in accepting the present-day interpretation of the vast majority of venous pulse records, and that the older method yielded analyses of the heart mechanism which were almost always upheld if submitted to the arbitration of the new instrument. And the importance of that conclusion would be more evident when it was remembered that the galvanometer was essentially a laboratory instrument, while the polygraph accompanied the clinician to the bedside of his patient. From that point of view the polygraph might be regarded as a go-between, obviating the necessity of moving a cumbersome apparatus. Of the more immediate benefits conferred by the instrument he spoke more hesitatingly. The size, weight, and cost of the galvanometer and its fittings materially restricted its sphere of usefulness. It had to be maintained as a fixed installation, and it was difficult to see how it could ever leave the immediate precincts of the laboratory or hospital. Those disabilities were reduced to some extent by the possibility of bringing a relatively large area within its immediate working sphere. The instrument might be connected by properly insulated wire to any ward or room within a convenient range. A single outfit would consequently supply a single institution or several institutions in its immediate vicinity. As a part of the equipment of a modern hospital or physiological laboratory, it was already almost a necessity. Once installed it gave a ready and infallible analysis of the sequence of contraction of the cardial chambers. A few minutes (three or five) placed the clinician in full possession of all the necessary data for the analysis of an arrhythmia in all but exceptional instances, and the data were of the most accurate nature. In several respects it presented material advantages over the polygraphic method. Its superiority as an instrument of precision was unquestioned, a quality which was dependent upon the directness of the method. A venous record was an expression of an effect of the heart upon venous inflow; the electric curve was an expression of the heart-beat itself. A second and considerable advantage consisted in the ease with which the majority of the records were read. Polygraphic curves often required minute and often tedious measurement. The majority of electro-cardiograms might be read at first sight. In brief, it was a weapon which had no equal for precision where an analysis of the cardiac mechanism was required; it took precedence of all other methods where evidence was conflicting; the information obtained was secured with a minimal expenditure of time. The comparison of one method of physical examination with another was always difficult, but restricting comparisons to hospital patients he had little hesitation in stating that in the routine examination of heart patients the galvanometer method afforded, or would afford in the near future, information of equal or greater value compared with any other single method at their disposal, be it instrumental or subjective. It must be allotted at least an equal place with percussion and auscultation, with sphygmomanometry and radiography. And in that respect it had to be said for it that the information it withheld it withheld as definitely; it was, in fact, a method of exactitude, a method of precision.—Sir WILLIAM ALLCHIN said that the work done by Dr. Lewis contributed to the advancement of methods of diagnosis.—After Dr. A. M. GOSSAGE had described how the electro-cardiographic method had been employed with success by Dr. Lewis in a case he (Dr. Gossage) had under his care, Dr. A. MORISON spoke, and then Dr. LEWIS replied.

Dr. SAMUEL WEST read a paper on a case of Acute Suffocative Catarrh of Pneumococcal Origin (Pneumococcal Bronchitis), which was fatal. Also a second case of long duration, unilateral and not fatal, with other analogous cases and remarks. The first patient was a man, aged 31, who was suddenly seized with cough and profuse expectoration. He was admitted into hospital four days later with extreme dyspnœa and cyanosis. The temperature of the patient was 103° on admission, gradually falling. The physical signs were those of acute bronchitis. The sputum was copious, not bronchitic, greenish in colour, and yielding pure culture of pneumococcus. Death occurred from exhaustion after 14 days' illness. At the necropsy recent hæmorrhagic infarcts were found, otherwise the lesions were of bronchitis only. The secretion was copious, cells nearly all polymorphonuclear, with culture of pneumococcus. The second patient was a female, aged 55, who was suddenly seized with pain in the right side and spitting up of bright blood. She was admitted ten days later, cyanosed and very ill. The physical signs were those of right-sided bronchitis. A culture gave pure pneumococcus. There was gradual recovery in 14 weeks. The third patient was a female, aged 18, who after severe measles suffered from acute general bronchitis with high temperature. There were no signs of consolidation, but there was extreme cyanosis and death took place in three days. The fourth patient was a male, aged 45, who had chronic stationary phthisis of acute onset, temperature moderate. There were no signs of consolidation. The bronchitis was at first unilateral and subsequently a little at the opposite base. Death occurred from dyspnœa and exhaustion. Dr. West said that the association of bronchitis with pneumonia varied in gravity according to the sequence. If pneumonia occurred in the course of bronchitis, it was not necessarily very grave. If signs of congestion occurred in the course of pneumonia it was practically always fatal for it was evidence of pulmonary failure. Acute congestion of the lungs might precede pneumonia and subside as the pneumonia localised itself—it might be unilateral or it might be associated with multiple disseminated patches, or it might exist alone without any consolidation. In the two cases recorded the sputum yielded pneumococci in pure culture. Acute suffocative catarrh might therefore be of pneumococcal origin, but in the case previously recorded was associated with a diphtheroid bacillus. The case with which he introduced the paper, as well as that described before in that section in 1908, were instances of Laennec's acute suffocative catarrh. In the earlier case he suggested that the affection was really an acute bacterial infection. The second case now recorded confirmed that view, and the

infective organism was the pneumococcus, as was the fact also in the next case described. Those cases might then be more accurately described as acute pneumococcal bronchitis, but, of course, it did not follow that in all cases of acute suffocative catarrh the infective organism would turn out to be the pneumococcus, though probably it would prove to be the most common. So far, they seemed justified in holding that pneumococcal infection of the lung might present itself in different forms; as a massive consolidation, the usual form in the adult; as multiple disseminated patches, a common form in children (primary broncho-pneumonia); as a general bilateral or even unilateral bronchitis. If that were so it was obvious that they must greatly widen their conception of the pneumococcal infection of the lungs.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION.

An Inquiry into the Value of Rectal Feeding.—The Reaction of Isolated Arteries to Certain Drugs.

A MEETING of this section was held on March 21st, Dr. J. GRAY DUNCANSON being in the chair.

Dr. W. LANGDON BROWN read a paper entitled "An Inquiry into the Value of Rectal Feeding." He reviewed the evidence which had been adduced in support of the absorption of foodstuffs from the large intestine when nutrient enemata were given, pointing out that in regard to proteins and fats it chiefly depended upon the failure to recover the whole of the administered nourishment by washing out the bowel. This was a fallacious method, since it was notoriously difficult to empty the bowel completely in this way, and the fact that the food could not be recovered did not prove that it had been assimilated, since it might have undergone putrefactive changes which would render it useless. The chief structure for the absorption of food was the highly specialised epithelium of the villi, and unless regurgitation through the ileo-cæcal valve occurred, an improbable event, the amount assimilated from rectal feeding must be very slight. He had observed the amount of fat in the tissue of a case of chyluria under Dr. Samuel West's care, first on a fat-free diet and then when enemata of pancreatised and emulsified fats were given. Though fat given by mouth increased the fats in the urine at once, enemata of fat did not. That dextrose could be absorbed per rectum was proved by the way it raised the respiratory quotient and abolished or diminished acidosis. Salts and water could certainly be absorbed in this way, and these were probably the constituents to which nutrient enemata owed their reputation. He had compared the nitrogenous output in the urine on rectal salines and on nutrient enemata as a safer guide to the assimilation of nitrogenous food by the bowel than the recovery method. In both the fall in the nitrogen excretion followed the same course and was directly comparable to that found in healthy fasting men. On giving the same food by the mouth as that contained in the nutrients the nitrogen excretion at once rose again. The conclusion was that if any protein were absorbed by the large bowel the amount was so small that it was not worth while to submit the patient to so unpleasant a procedure. When the efficacy of nutrient enemata was so seriously open to question their drawbacks assumed greater importance. These were considered in turn, and the speaker expressed the opinion from his experience that between the Lenhartz method of immediate feeding by the mouth and the use of rectal salines with 5 per cent. of dextrose there was no place in therapeutics for the nutrient enema containing protein and fat.

Dr. D. V. COW read a paper on the Reaction of Isolated Arteries to Certain Drugs, the drugs referred to including carbon dioxide, alcohol, adrenalin, pituitary extract, the digitalis series, ergot, barium and the nitrites, and the method of observation that introduced by O. B. Meyer. Adrenalin caused contraction of isolated rings of most arteries. Rings from peripheral branches of the pulmonary artery were unaffected by it, while cerebral and coronary arteries were relaxed. Pituitary extract caused contraction of most arteries, but rings from the large arteries of the splanchnic area were relaxed by it, the effect becoming more marked as the periphery was approached. All arteries were alike stimulated to contraction by barium and relaxed by nitrites. Calcium salts decreased the sensitiveness to adrenalin and pituitrin, but left that to barium unaffected.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on March 27th, Mr. CHARTERS J. SYMONDS, the President, being in the chair.

Mr. WILFRED TROTTER showed three cases. The first was one of Extensive Epithelioma of the Upper Opening of the Larynx, with involvement of cervical glands. Local excision of the tumour without laryngectomy was performed one year and ten months ago. There were no recurrence and no affection of speech or swallowing. The case was shown as evidence that satisfactory results could be obtained in the treatment of malignant disease of the entrance to the larynx without the very serious mutilation of laryngectomy, and to emphasize the fact that in attacking growths of this region the operation should begin with a complete exposure of the mucous surface on which the tumour had started. In that only could a satisfactory idea of the extent of the growth and adequate guidance during the removal of it be obtained. The patient was shown before the Laryngological Section of the Society of Medicine 15 months ago. Some doubt was then expressed as to the adequacy of the operation to prevent recurrence. The specimen of the tumour removed was exhibited. Mr. Trotter's second case was one illustrating the result of the Treatment of Carcinoma of the Tongue with very extensive Involvement of Glands. The operation was done two years and eight months ago and there was no recurrence. The points which Mr. Trotter called attention to in connexion with this case were: (1) the degree to which the tongue recovered its bulk after extensive resections of its substance; (2) the fact that extensive secondary involvement of lymphatic glands was by no means so serious a feature in cases of epithelioma primary in the mouth as was sometimes supposed, provided an adequate gland operation was done; and (3) the fact that in making a prognosis in such cases the physical signs which the individual glands presented were within limits more important than the number of glands involved. A single epitheliomatous gland of ill-defined outline was of much graver significance than a dozen such glands the outlines of which still remained distinct. His last case illustrated the result of the Excision of the Tonsillar Region for Epithelioma. The operation took place one year and ten months ago. There was no recurrence. The deformity of the pharynx was slight. Speech and swallowing were normal. The case was a representative example of the results of treatment of carcinoma of the tonsil at a moderately early stage of the disease. It illustrated the fact that the disease was comparatively benign and that it could be dealt with satisfactorily at the cost of very slight mutilation and without the production of any disability.

Dr. H. E. SYMES-THOMPSON showed a case of Old-standing Bronchial Fistula not interfering with health.

Dr. J. PORTER PARKINSON showed three cases. The first was one of Morbus Cordis. The second was one of Hodgkin's Disease with unusual Pyrexial Crises. The patient had attacks of high fever in which it mounted to 104° or 105° F., lasting two to five days, separated by invervals of complete apyrexia, during which there was nothing in the clinical signs to indicate an outside cause for the fever, the sudden attacks of which seemed to warrant the name of "pyrexial crisis." During each of those crises the enlarged glands diminished in size and became softer, enlarging and hardening again in the apyrexial interval. His third case was one of Multiple Aneurysms.

Mr. P. MAYNARD HEATH showed a case of Lateral Hypertropic Arthritis of the Knees existing for 15 years in a girl aged 18 years.

Dr. F. S. LANGMEAD showed a case of Congenital Heart Disease. The patient was an Italian boy, aged 5 years, who was first seen during the course of medical inspection at a county council school and had since been attending the Royal Free Hospital. The mother talked very little English, so that not much history of the symptoms had been obtained. It had been noticed at school that he was always very slow in his movements, getting very short of breath on the slightest exertion. There were extreme cyanosis (which dated from birth) and marked clubbing of the ends of the fingers and toes. The heart beat forcibly and was considerably enlarged. A feature of special interest was that no bruit could be found.

Mr. WALLACE ASHDOWNE showed a case of Intermittent Hydronephrosis in which cure had resulted after plastic operation upon the ureter and pelvis.

Dr. W. ESSEX WYNTER showed a case of Polycythæmia Rubra. The patient was a male, aged 52 years, who was admitted to hospital on Feb. 18th on account of gout in the right foot. Such attacks had occurred on and off for three years. The left foot and right wrist had been subsequently affected. The patient had a deep crimson complexion, with dilated vessels on the cheeks and sclerotics. The mucous membranes and tongue were almost black. He stated that he had lost weight to the extent of 2 st. in two years. The spleen was hard and much enlarged, extending to the level of the umbilicus. There was also some enlargement of the liver.—Dr. WYNTER also showed a case of Communicating Ventricles.

Mr. W. H. BATTLE communicated a case of Traumatic Rupture of the Small Intestine and of the Mesentery without external wound in which recovery followed operation. The patient was a boy, aged 5 years and 9 months, who was admitted to St. Thomas's Hospital in December, 1910. Three hours before admission he had been knocked down in the street by a horsed tram. The boy was somewhat white in the face, but was intelligent and alert. He appeared, however, to have some difficulty in respiration and complained of abdominal pain. On examination of the abdomen it was not moving well. General tenderness was present. There was no distension. On percussion there was well-marked dulness in both flanks; almost to the level of the outer edge of the rectus muscle the rigidity of the abdominal wall was very marked. An incision was made extending from above the umbilicus downwards to about three inches below the umbilicus to the left of the middle line, and the left rectus was displaced outwards. Search was made for rupture of the mesentery and this was found associated with a rupture of the gut about three feet from the ileo-cæcal valve. The laceration of the mesentery was a complete one and extended from the intestine to the attachment to the front of the spine; two or three arteries were bleeding freely, most of the blood coming from a fairly large vessel about two inches from the margin of the gut. These were secured with clamps and the opening into the gut was examined. Placed on the posterior aspect of the gut this was quite invisible until the coil had been lifted; it was irregular in outline. The damaged area was of about the size of a sixpence, the peritoneum being torn back over that portion exposing the muscular layer, in which was a complete tear through which the mucous membrane partly protruded. The opening was of about the size of a No. 4 catheter. A continuous Lembert suture of silk was used to close this, after which the vessels were ligatured in the mesentery, the edges of which were then united with interrupted silk sutures. There were no peritonitis and no fæcal smell. Recovery followed.

Mr. T. H. KELLOCK showed two cases of similar deformity at the elbow-joint in sisters.

Dr. STCLAIR THOMSON showed two cases. The first was one of Complete Stenosis of the Larynx, apparently due to traumatic septic perichondritis, but microscopic sections suggested epithelioma. The second was a case of removal through the mouth of a half Tooth Plate impacted in the œsophagus for a long period. The half tooth plate was swallowed in May, 1908, and remained in the gullet until removed through the mouth on Oct. 11th, 1910. This case was interesting as showing (1) how little harm a foreign body might produce in the gullet, and (2) how its diagnosis might be overlooked. The patient was twice admitted to one of the large London hospitals; he also attended a special department of another London hospital, where a bronchoscope was passed into the right bronchus and a bougie passed down his gullet. While at a special hospital he was examined by the œsophagoscope and nothing was detected. He reported that he was lectured on as a case of functional dysphagia and was advised to join the army. He subsisted on fluids and slops. It was curious that the X rays failed to reveal the plate. Dr. Thomson first saw the foreign body during an œsophagoscopic examination under cocaine, and then had the radiograph done which was exhibited. Four days afterwards the plate was removed under chloroform. The half tooth plate had apparently been overlooked: (*a*) because it did not cause more symptoms of irritation than it did; (*b*) because being of vulcanite it threw a feeble shadow on the screen; and (*c*) because from its concave shape it allowed the bougie and the œsophagoscope to push it to one side.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 15th at the Royal Alexandra Hospital, Brighton, Mr. G. Morgan being in the chair.—Mr. Morgan exhibited microscopic slides: (1) Trypanosomes from the Blood of a Rat; (2) Miliary Tubercles in a Hernial Sac of a boy aged 8 years, showing giant cells; (3) section of a Tuberculous Lymph Gland of the Neck from a child aged 5 years, showing a number of giant cells; (4) section of a Myeloid Sarcoma from the Head of the Humerus of a girl aged 9 years; (5) a slide of a Cavernous Angioma occupying the greater part of the right side of the neck and the right forearm; (6) a longitudinal section of a Grain of Wheat, showing the embryo with the radicle and root-cap, the cotyledon, endosperm cells packed with starch grains, aleurone layer of cells containing proteid, and the coat covering the whole. Mr. Morgan also showed: 1. A case of an Exostosis growing from the side of the nose in a girl aged 12 years. A year previously she had had a lead pencil driven into her nose, and the swelling commenced six months after. 2. A case of Prolapse of the Ovary in a baby aged 8 months. The ovary was removed and found to be cystic.—Mr. H. H. Taylor showed a child, aged 2 years, suffering from marked Proptosis of the Right Eye. The history was that on Feb. 1st the child fell and struck the corner of the eye on a window sill. There was some bleeding but not much swelling, and the mother did not call in a medical man. The bulging of the eye had been getting worse for the last three weeks. There was no impairment of vision as far as could be ascertained, and the movements of the eye were normal. There was some swelling of the upper lid which was discoloured. It was thought to be a case probably of sarcoma of the orbit.—Dr. A. Winkelreid Williams showed a patient with Kerionic Ringworm which was due to microsporon, and also a stained specimen of the same.—Mr. Stanley Read showed a case of Cleft Palate treated by means of an obturator, which had improved speech. The patient had been operated on twice previously but this had failed on both occasions.—Dr. E. Hobhouse showed a case of Tuberculous Ulceration of the Intestine in a girl aged 13 years. On Dec. 24th of last year she complained of abdominal pain, and shortly afterwards the stools became pale green and liquid. She had become very emaciated, and there was now some blood in the motions. There was a cavity at the right apex. 2. A case of Effusion into the Knee-joints due to Congenital Syphilis. Some years ago the child was in hospital with malaria. 3. A case of Congenital Deficiency of the Pancreatic Secretion as described by Dr. Byrom Bramwell. The patient, a girl aged 7 years, had had diarrhœa since birth. The stools were copious, almost white in colour, and unformed. They were not very frequent, about two, three, or four a day. There had also been sickness for the last two weeks. The motions were getting more fluid lately, but the colour remained the same. 4. A case of Acute Myelitis of the Cord. The patient, aged 12 years, became paralysed in both legs last July, and this was shortly followed by incontinence of urine and fæces. Very little improvement had taken place, but there was some return of sensation, and the plantar reflexes and knee-jerks were now present. 5. A boy, aged 6 years, suffering from Right Facial Paralysis due to injury at birth. 6. A girl with Facial Paralysis from a chill. 7. A girl, aged 25 years, suffering from Right Facial Paralysis and Deafness. 8. A case of Habit Spasm. 9. A case of Pseudo-hypertrophic Paralysis in a boy. The calves were enlarged and firm, and there was also enlargement of the supra-spinatus and the infraspinatus muscles. He had difficulty in getting up, and at times his legs gave way suddenly. 10. A case of Aortic Regurgitation in a girl, aged 3½ years, due to congenital malformation of the valve. 11. A girl, aged 12 years, with a pulse of 128 but quite regular. The hands and feet were very blue. A sister was similarly affected and the mother was the subject of Graves's disease. 12. A girl, aged 3 years, who for the last year had been listless, losing flesh, and had had no appetite. Lately there had been difficulty in walking. She was treated with liq. pancreaticus and had now gained several pounds in weight. Her appetite had returned and

she was now quite well.—Dr. Walter Broadbent showed: 1. A child with Infantile Paralysis of the Right Upper Extremity, which came on in November. The nuclei of the fifth and sixth cervical nerves were probably destroyed and those of the fourth and seventh damaged. All the muscles of the shoulder and arm were affected, and only slight movements of the fingers and wrist were possible. 2. A baby with Tuberculous Meningitis. The child was almost comatose, the history being that it had been very drowsy for one week, and very constipated, the bowels not having acted for three days. There was no sickness. The mother had lost four other children from unknown causes. There was some retraction of the neck and partial rigidity of the left leg and arm, but not paralysis. The eyes were generally turned to the left. At present there was no optic neuritis and no vomiting, and the cerebro-spinal fluid on lumbar puncture was clear and not under pressure. Kernig's sign was absent. 3. A Cretin, aged 2 years, who had been treated with thyroid extract. There was a wonderful improvement in it—in fact, it was difficult to recognise it as the same child. 4. A case of Pericarditis in a child aged 8 years. She had had rheumatic fever twice before. The treatment was an ice-bag kept constantly applied over the heart, and a mixture containing sod. salic. and pot. cit. She did very well. Now there was only friction down the right border of the heart, which was better heard by pressure with the stethoscope. The heart was much enlarged, partly from old mitral regurgitation; cardiac dulness extended from 1 inch to the right of the sternum to 2 inches to the left of the nipple line. At the apex in the sixth space 2 inches outside the nipple line there was a loud long systolic murmur replacing the first sound, and no second sound. In the tricuspid region were a poor first sound, systolic murmur, and a second sound, also a slight to-and fro murmur. At the pulmonic cartilage were a systolic murmur and a very loud reduplicated second sound. The friction was heard just outside the right border of the sternum, down to the fifth space. The liver reached two fingers' breadth below the costal margin. There were no rheumatic nodules. 5. The Brain of a child, aged 7 years, containing a large gliomatous tumour in the left frontal lobe. The lateral ventricles were much dilated, especially the left. Early in March last year her right leg became weak, the foot dragging. By the beginning of April the leg was paralysed, and a fortnight later the right arm became rapidly involved. The child was then brought to the hospital and admitted. There was no aphasia. She was very sleepy and had a severe headache. There was double optic neuritis. Von Pirquet's test was positive. A diagnosis of tuberculous growth behind the upper part of the left Rolandic area was made. Mr. H. H. Taylor, assisted by Mr. L. A. Parry, trephined the child, but there was no appearance of tumour, but the dura mater was not incised at the operation. She seemed better for nearly a month, and then had some convulsions and became comatose. A hollow needle was then pushed through the soft opening of the skull into the lateral ventricle and a few drachms of cerebro-spinal fluid squirted out. About two drachms of fluid were in this manner let out every day or every other day, according to her condition. She improved steadily, putting on flesh and becoming brighter, and by September she could pull her right leg up and down and move her fingers. In October she began to get worse, with vomiting and convulsions, and she died in November.—Mr. L. A. Parry showed: 1. A Series of Nævi treated by the application of Solid CO_2. He also demonstrated the method of preparation and use of the pencils of carbon dioxide. 2. A case of Bilateral Congenital Talipes Equino-varus in a baby on whom he had performed Parker's syndesmotomy, followed by division of the tendo Achillis in each foot. 3 A case of Congenital Laryngeal Stridor in a baby 6 months old. The stridulous breathing had been noticed since birth; it varied from time to time and did not disappear during sleep. The child seemed perfectly happy and quite unaffected by its trouble. There was no alteration in the voice. 4. A boy, aged 12 years, from whom he had removed a Large Mass of Tuberculous Glands a year ago. 5. A mentally defective boy upon whom he had performed a Radical Cure for Hernia by ligature of the neck of the sac, with removal of a portion of it. 6. A boy, aged 12 years, with Paralytic Talipes Equinus. His birth had been a forceps one and he had hemiplegia on the right side. His walking was getting more difficult and a tenotomy, with stretching of the structures of the foot, was to be done. 7. A girl, aged 3 years, with Congenital Shortening of the Femur, and Absence of two-thirds of the Tibia of the same side. 8. A case of Caries of the Spine in a girl, aged 3 years, treated by triple extension on a divided mattress. 9. A girl, aged 5 years, with a small Exostosis of the Os Calcis, which caused no symptoms. 10. A girl, aged 13 years, with Left Dorso-Lumbar Lateral Curvature, the muscles of the right side of the neck being much wasted, probably from injury to nerves during an operation for tuberculous glands, of which there was evidence in an old scar. 11. A case of Cleft Sternum due to non-union of osseous centres in the development of all pieces of the sternum. The scar was occupied at birth by a raw surface which healed over. It was probably a case of slight ectopia cordis. The separation was well marked if the patient coughed. 12. A case of Dislocation of the Head of the Radius with curved radii. 13. A boy with Hæmophilic Joints. There was no history of bleeding in the family, but there were three brothers who showed similar joint affections, and four sisters who were quite normal. This boy had a sudden hæmorrhage into his knee-joint and at other times had had the same thing in other joints. 14. A case of Schlatter's Disease. There was enlargement of the tibial tuberosities. 15. A case of Multiple Enchondromata in a boy. 16. A boy with Spastic Paralysis of the Right Arm, with marked athetosis following a fit at the age of 3 years. There was slight affection of the leg and a slight degree of mental deficiency.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this institution was held on March 30th, Dr. T. R. Bradshaw, the President, being in the chair.—Dr. Stenhouse Williams and Dr. C. Forsyth brought forward experiments to demonstrate that the Oral Administration of Vaccines was unreliable. They pointed out that Latham's work was largely vitiated by the fact that in the great majority of his cases he gave the horse serum along with the vaccine. In their own experiments they administered pneumococcic vaccine to guinea-pigs both by the intra-peritoneal inoculation and by oral administration. A dose that was surely fatal by inoculation failed, even when multiplied four or five times, to produce on oral administration any apparent result. They considered that, even though some fraction of a dose given by the mouth to a human being might be absorbed, it was impossible to know in what proportion, or whether such proportion was constant. The administration of each dose must, therefore, be regarded as a matter of pure guess-work.—Dr. C. Rundle considered that some effect must result from the oral administration of vaccines, since he had been able to detect the effect of a small overdose, as shown by symptoms similar to those of a small overdose given by the subcutaneous method.—Dr. W. B. Warrington was surprised that so little evidence had been brought forward by the advocates of the oral method of administration.—Dr. N. Percy Marsh read a paper upon Epidemic Anterior Poliomyelitis, in which he drew attention to the wide distribution of this disease in the last few years in Europe and America, its appearance during the summer and autumn of 1910, and its probable recurrence in 1911. The symptoms of the epidemic compared with the sporadic type were briefly described and cases illustrating the former were read in detail. The recent investigations of Flexner and Lewis into the experimental disease in monkeys were then reviewed. The clinical effects of inoculation, the pathological peculiarities of the disease, and the nature and properties of the virus were described. It was pointed out that these investigations had demonstrated that the path of infection and also of elimination was probably by way of the naso-pharynx. The establishment of the phenomena of active and passive immunity was also referred to and the possibility that in the near future a specific serum would be obtained. With regard to treatment, the importance of isolation and disinfection of the discharges of the naso-pharynx was emphasised and also the value of urotropine in the early stages. Electricity and massage should be employed as soon as the painful symptoms had subsided and the prevention of deformities by means of suitable appliances should receive early attention.—The President mentioned that anterior poliomyelitis was occasionally met with in the adult, and in the summer of 1907 he had had under his care two cases in men, aged 28 and 53, from the same district, who were taken ill within 10 days of each other. He considered that the great difficulty in the way of employing any specific treatment must always be the difficulty in recognising the disease before any irreparable damage had

been done to the nerve centres.—Dr. T. R. Glynn remarked upon the rarity of this disease in adults. In a long hospital experience he had met with but few examples. In one typical case there was paralysis of the muscles of the neck as well as of the extremities. This patient made a good recovery with the exception of some weakness of the anterior tibio-fibular group of muscles.—Dr. Warrington thought that the diagnosis in early cases was more difficult in children than in adults; in the latter some well-defined rules could be formulated for the distinction between anterior poliomyelitis, Landry's paralysis, and polyneuritis of the very acute type. In children he thought that lumbar puncture investigations would play an important part in the distinction between meningitis and poliomyelitis.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held at the Guildhall, Windsor, on March 30th, Dr. E. S. Norris, the President, being in the chair.—The President read notes of a case of Hæmorrhagic Pancreatitis. The patient, who had recently died in King Edward VII. Hospital, Windsor, was a woman, aged 53 years, stout, and well nourished. For three days there had been great abdominal pain and violent vomiting. She could sit up in bed and move freely, but continuously kept shouting out in pain. The bowels did not act. The abdomen was opened by Mr. J. O. Skevington, but nothing abnormal was seen at the operation. The necropsy revealed extensive fat necrosis in the mesentery, while the omentum was healthy. The gall-bladder contained one stone about an inch in diameter. The pancreas was swollen to about twice its original size; it was firm and hard. The head of the organ was yellowish and mottled with white, while the body and tail were red. Small hæmorrhages were visible in between the lobules in the body and tail, but in the region of the head the place of the hæmorrhages appeared to be taken by patches of fat necrosis.—Dr. W. F. Lloyd related the case of a young girl who journeyed by train and performed various acts in an apparently unconscious condition.—Mr. J. H. Tomlinson exhibited and demonstrated a model which he had constructed for the purpose of showing a curious colour effect due to simultaneous contrast.—Mr. R. Timberg, superintendent of the Physical Exercises Department, St. Thomas's Hospital, London, read a paper entitled "Spinal Curvatures and their Treatment by Physical Exercises." He divided spinal curvatures according to their etiology into osseous and musculo-ligamentous. Among the former the curvatures due to rickets, caries, and spondylitis were differentiated, other rarer causes being merely referred to. In dealing with the second group of curvatures, where the primary fault is to be found in the muscular and ligamentous structures, an explanation was first given of the origin of the physiological curves of the spinal column, and then of how these curves can be abnormally increased, or how various lateral curvatures can arise through any inequality of the support for the spinal column, or unequal distribution of the weight which it has to carry, or unilateral muscular action upon it. A plausible theory was given of how the action of the spinal muscles tends to produce a rotation of the spinal column when a lateral deviation exists, thus converting this into a true scoliosis. Various methods of treatment were referred to, physical exercises being placed foremost in importance and strongly advocated even in cases where no cure could be expected, and where artificial supports have to be used. Mr. Timberg then gave a practical demonstration of a variety of exercises useful in these cases. He also demonstrated several appliances used in the treatment of spinal curvatures, and instruments used for measuring the extent of the curves were also shown to the members.—The proceedings closed with a vote of thanks to Mr. Timberg for his interesting address.

A CORONATION CARAVAN MEET.—The Caravan Club of Great Britain and Ireland, in which certain members of the medical profession are interested, have decided to hold a Coronation Meet at Coulsdon, Surrey, commencing on Saturday, June 17th, and continuing through the following week. It is thought that a considerable number of country members will avail themselves of this opportunity to visit London, sleeping in their caravans at night and seeing the festivities during the day. Particulars of the club can be obtained from the honorary general secretary, Mr. J. Harris Stone, 358, Strand, W.C.

Reviews and Notices of Books.

A Monograph on Albinism in Man. By KARL PEARSON, F.R.S., E. NETTLESHIP, F.R.C.S. Eng., and C. H. USHER, M.B., B.C. Cantab. London: Dulau and Co. 1911. Text, Part I., pp. vii.–226. Atlas, Part I., photographic plates A–Z and AA–ZZ. Price (to subscribers to whole work) 35*s*.

THESE two volumes are the first instalment of a comprehensive monograph on Albinism in Man. The text consists of an introductory chapter and chapters on Early Historical Notices, the Geographical Distribution of Albinism, the Albinotic Skin, Leucoderma, and Partial Albinism and Piebalds. Other aspects of the question will be dealt with in the concluding section of the work, which the authors expect will be issued during the present year. This section will contain chapters on the Albinotic Eye in Man, on the Albinotic Hair in Man, on the Albinotic Eye and Hair in Animals, on the Correlation between Albinism and Other Defects, and on the Heredity and Statistics of Albinism.

Albinism might be defined as the complete congenital absence of pigment from all parts of the body, but this definition would lack practical utility as the complete absence of pigment cannot be ascertained without the most elaborate microscopic examination. It would also be inaccurate, for in the majority of the few cases in which the eyes of undoubted albinos have been investigated microscopically a certain amount of pigmentation has been found. The hair also of albinos with characteristic eyes and skin may show tinges of straw, yellow, or red towards its terminals, and it is probable that a certain amount of pigment is also usually present in the skin. The authors therefore give the following definition of a complete albino for the purposes of the monograph—namely, "one whose skin is of characteristic pallor or milky whiteness, whose hair is 'white,' tinged possibly with yellow or straw, and whose eyes have pink or red pupils, translucent irides, with the usual accompaniments of defective vision, nystagmus, and ametropia."

Skin, hair, and eyes may severally show albinism, which may be perfect, or imperfect in that a sensible quantity of pigment is discernible. Further, the albinism shown may be complete for any of these three parts of the body in that the whole is affected, or partial in that part only is albinotic, while the remainder is normally pigmented. In describing or classifying an incomplete or imperfect albino it is therefore necessary to state whether hair, skin, or eyes are deficient in pigment, and, for each affected part, whether the deficiency is complete or partial, perfect or imperfect. A simple system of notation is suggested by which the whole of this information may be conveyed in three letters. Complete albinism in one member of a family may be associated with an incomplete condition of the same defect in another member—a fact which is of some importance in relation to theories of heredity.

The occurrence of albinos has been recognised for many centuries, and the existence of an albinotic race is a tradition current in the writings of many authors from Pliny onwards. The most recent version of it appeared in the *Boston Sunday Herald* of Dec. 15th, 1907, in which an albino colony inhabiting the Boxwood district of Lakeville is described. Investigation has, however, failed to confirm this story. The earlier versions—e.g., the Leucæthiopes of Pliny—may have been due to the discovery by travellers of branches of comparatively fair races of Moors in Africa and of actual albinos occurring sporadically in various places. In the year 1667 Kjöping described a race which he calls *Homo sylvestris* or *Homo nocturnus*, living in Tharnodo, one of the

Moluccas. These people were quite white in hair and skin; they could not see during the daytime but only at night. This race was included by Linnæus, in the twelfth edition of the "Systema Naturæ" in 1766, in the same species with Troglodytes and the orang-outang seen by Bontius in Java and described by him.

The discussion on the geographical distribution of albinism occupies more than half of the text of Part I. The material available is not sufficient to render possible a really satisfactory account of the percentage of albinos present in different parts, even of the civilised world. For this purpose it is essential that there should be something in the nature of a census, and no complete census of albinism has as yet been made in any part of the world. One of the most satisfactory of the investigations into the prevalence of this condition is that pursued by Dr. V. Magnus in Norway, through the agency of the Distriktlaegen (the official medical man for the district). He was able to ascertain the existence of 130 albinos, and to procure pedigrees of 100 of these distributed through 50 families. The returns are probably more complete for the country districts than for the large towns. In the three largest, Kristiania, Bergen, and Trondbjem, the recorded cases of albinism occur in a proportion of under 1 in 20,000 of the population, whereas in the smaller towns and country districts their incidence is approximately 1 in 7000. In contrast to Norway, Sweden appears to have been almost unexplored, only one case having been recorded, and that in the year 1869, and information is also lacking from Denmark. Albinism seems to be exceedingly scarce among the Slavonic population. Inquiries were instituted among the medical men of St. Petersburg and the clergy of Northern Russia, but none had heard of any case. From Moscow three cases are recorded at the present day, while during the years 1845–52 among 46,278 patients at the Ophthalmic Hospital 4 were albinos. This would probably be equivalent to 1 in 100,000 of the general population.

From Germany Virchow's report on the great pigmentation survey of school children gave promise of being a valuable record, but as in this survey albinos were not entered in a special category it is impossible to estimate their numbers accurately from the returns made. 400 of the children were recorded as having white hair out of a total of 4,000,000, but of these only 23 had also red eyes, so that if only these white-haired children with red eyes are albinos the proportion among German children would be 1 in 200,000. This is probably an under estimate, since to judge from the number of published cases the defect does not appear to be very rare in Germany. From Austria the data are even more inadequate; from Spain and Portugal there are no records at all; and in France, Holland, Belgium, and Switzerland only a few cases have been brought together. If we consider next the British Isles, albinism appears to be more frequent in Scotland. The new material collected consists of 172 cases, of which between 100 and 150 were still living; as the districts covered in the investigations contain not quite half the total population, it appears probable that the frequency is about 1 to every 15,000–25,000 inhabitants of the country. From England, also, a large number of cases have been collected. London furnishes 128, and almost every county contributes its share. The numbers from Ireland and Wales are comparatively few. In Italy the question has been investigated more systematically than in other countries. The Italian Anthropological and Ethnological Society instituted a census by issuing inquiry schedules to the parish priests. From the results obtained in this way and reported on by Raseri it appears that about 1 person in 29,000 throughout all Italy was an albino. The authors of the monograph give reasons for supposing that the frequency is in reality rather greater than this and estimate it at 1 in 23,000 to 1 in 24,000.

Albinism appears to be more common in Sicily than in Italy. Arcoleo gives some particulars of 22 families containing 34 male and 28 female albinos from Palermo. It is not possible to calculate directly from these numbers the prevalence of the abnormality in that town, but it may be set down as being probably 1 in 14,000 to 1 in 16,000 persons.

In the section dealing with the yellow- and red-skinned races—Asiatics, Polynesians, Australians, and Americans—an enormous quantity of evidence is presented. It would be impossible to give at all a satisfactory account of this within the limits of the present article, but it would appear that albinism is not confined to any particular part of the world, and it is improbable that it is completely absent from any country. Its relative commonness in the Fiji Islands is worthy of note, where 30 living albinos are recorded among a population of 86,816.

Among the black races albinism is not infrequent, and has been recognised for several centuries. Xanthism also is reported in a great number of cases. A xanthous negro possesses a red or yellowish-red skin and hair that is usually brown; the eyes are also brown of varying shades. Xanthous and albinotic negroes often occur in the same stock. The pedigree of one, of the name of Jappe, is of especial interest. Jappe, of whom two excellent portraits are given on Plate CC of the atlas, is "a well developed Myambaam of about 25 years of age; of very light, almost white colour. His skin has more the healthy colour of a European somewhat sunburnt, not the deadly white colour of a pure albino. The iris in this as in other cases was brown. The wool on the head, slight moustache and beard, and pubic covering were of brown colour." His paternal grandfather, a normal black, married an albino negress, the offspring was Jappe's father, a xanthous negro, who married a "white Kaffir." Jappe resulted from this union, and he himself marrying a normal black negress has two xanthous children.

The chapter on the albinotic skin is full of interesting matter. It begins with an historical account of the views held as to the causes of albinism. One school looked on it as disease produced either by the intra-uterine influence of the mother or by external causes, such as a damp climate or a diet consisting too exclusively of fish. It is probable that congenital partial albinism was often confused with the appearance of white patches on the body due to various diseases of the skin. Among the intra-uterine influences "maternal impressions" figure largely. The statement that albinism is often found associated with cretinism gained a considerable currency, but it appears to rest on no evidence whatsoever.

The latter part of the chapter is devoted to a discussion of modern microscopic and bio-chemical investigation into the nature of animal pigmentation. The many conflicting views on this question are very clearly described, and the following conclusions are arrived at: "(1) The presence of melanin is responsible for skin pigmentation; (2) melanin does not appear to be a direct product of hæmoglobin; (3) the supply of pigment by way of the blood or otherwise (by means of injections) has not hitherto been successful in increasing existing pigmentation or producing it where it was absent; (4) it seems probable that pigment is created and stored *in situ*, and is due to a metabolic process not yet fully understood; (5) the possibility of abnormal absence and abnormal presence of pigmentation being extremes of one normal metabolic process is, perhaps, worthy of consideration; (6) the production of pigment is very probably due to the local action of a tyrosinase or ferment on tyrosin; (7) it has been suggested that the cause of albinism is the absence

of this ferment." As an alternative the authors suggest that the difference between a normally pigmented individual and an albino is one of cellular structure. Absence of the ferment may be an explanation of complete albinism, but in partial albinism the ferment must at any rate be present in the pigmented parts. Anomalies of cell structure may, however, prevent it reaching some parts of the body, or may render impossible the storage of pigment even if formed.

The remainder of the volume is occupied by a consideration of leucoderma and partial albinism. Partial albinos may be either piebalds or spotlings. The piebalds have the normal pigmentation variegated by comparatively large white areas of the body, while among the spotlings pigment is absent only from comparatively small patches. The latter are far more common. We have indicated in a general way the contents of this volume, but it is almost impossible to give any adequate picture of the very wide range from which they have been drawn. All the literature, ancient and modern, which could have any bearing on the subject appears to have been effectively searched, while countless individuals have contributed fresh evidence. The manner in which all the facts, theories, and fancies have been marshalled is worthy of the highest praise, and any part of the volume can be read with ease and interest. As in all the publications issuing from the Biometric Laboratory and Eugenics Laboratory at University College, the print and paper are excellent, and the 52 plates of illustrations in the atlas have been reproduced in a faultless way.

The Racial Anatomy of the Philippine Islanders, introducing New Methods of Anthropology and showing their Application to the Filipinos, with a Classification of Human Ears and a Scheme for the Heredity of Anatomical Characters in Man. By ROBERT BENNETT BEAN, B.S., M.D., Associate Professor of Anatomy, the Tulane University of Louisiana, New Orleans, La.; formerly Associate Professor of Anatomy, Philippine Medical School, Manila, P.I. With 19 illustrations from photographs and 7 figures in the text. London and Philadelphia: The J. B. Lippincott Company. 1910. Pp. 236.

MANY attempts have been made to sort out mankind and to invent some system by which each individual so sorted out may be labelled as the representative of some definite type. In the making of such systems most of the salient points of the body have been seized on, and all the human race has been judged on the standard of the form, the size, and the special features of some particular portions of the human frame. Universal success does not reward these systems, and their conspicuous failure is often more likely to be apparent to the observant lay traveller than to the professed anthropologist. It is a truth that the human heritage is so mixed and so complex that individuals may not be satisfactorily labelled and set aside as representatives of certain chosen types, and even if the labelling and sorting is done with the greatest care it will result only in the production of groups of individuals who resemble each other in some few chosen points, but differ totally in a vastly greater number of more important features. Dr. Bean has taken as his standards such features as the total height of the body, the cephalic index, and the eye colour or ear form. Upon these criteria he has attempted to standardise as definite named types a large number of individuals of the very mixed population of the Philippine Islands. He designates some of these types as "Iberian," some as "Primitive," "Mixed Primitive," or as "Australoid"; others he labels "Alpine," "Blends," or the more cryptic "B.B.B. type." Negrito, Malay, Hindu, Arab, Chinese, and Spaniard—these, and others, have left their legacies of form and feature in the inhabitants of the group, and we are tempted to speculate if the author would not have derived more real knowledge of the people he studied if, instead of measuring their ears, he had asked them whence they came and what was their race and parentage. Figures, and tables of figures, are but poor substitutes for observation and common-sense biological insight in tabulating living man. To deal in this fashion with a living race of known antecedents is to render the science of anthropology absurd to a degree which produces the unfortunate result that its lack of utility and soundness is apparent to every observant lay critic. Justified ridicule can only accrue to a misused science which speculates upon the influences of "paleolithic man in the Philippines," as argued from the supposed existence of a race—"Homo Philippensis"—whose characters are established from the examination of one solitary individual who presented himself at the dispensary and "was treated for sexual neurasthenia." Of this man the author knows absolutely nothing; his parentage, his race, his home, and his family are all in the dark. He is certainly a native of low type and of obscure antecedents; but these are not the qualifications for being regarded as a specimen of a race with "close relationship to the Neanderthal type."

Organic and Functional Nervous Diseases. By M. A. STARR, M.D., LL.D., Ph.D., Professor of Neurology, Columbia University, New York. Third edition, thoroughly revised. With 300 illustrations. London: Baillière, Tindall, and Cox. 1910. Pp. 911. Price 25*s.* net.

THE third edition of this well-known text-book is larger than the preceding ones, comformably to the numerous advances that are being made in the science of neurology. It has been brought up to date by the inclusion of new material, more particularly in the chapters relating to functional nervous disease. In its present form the book contains an immense amount of information based on the experience of its author, and the utility of the volume is enhanced by numerous references to the literature on any particular matter that is provocative of discussion. Thus the volume is characterised by an absence of dogmatism, and, on the other hand, by a personal note, especially in the paragraphs on therapeutics, which the reader will fully appreciate. This being so, it is unfortunate that some of the author's statements do not appear to have undergone a requisite amount of revision. Such sentences as "the loss of concepts has been termed apraxia; the varieties of apraxia—viz., psychical blindness, psychical deafness, amnesia, and astereognosis," are both misleading and inaccurate. To say that "the modern conception of hysteria is that elaborated by the French school and best portrayed by Babinski" would seem to imply that no other school has a modern conception of hysteria, and that Babinski represents the French school in its entirety, which is very far indeed from being the case, as is pointed out in another column in dealing with the current issue of *Brain*. To be told that "a very constant symptom of bulbar paralysis is an emotional state which leads to undue laughter, or more often to frequent crying without apparent cause: this must be regarded as a local symptom of pons disease," is doubly confusing. Many of the illustrations are excellent, but a number of printer's errors in the text—e.g., "hypocampal" for "hippocampal"—bear witness to the hastiness of revision.

LIBRARY TABLE.

Manual of Clinical Pathology for the General Medical Practitioner. By RICHARD WEISS, M.A., Ph.D., F.C.S., in collaboration with GEORGE HERSCHELL, M.D. Lond., and ANDREW CHARLES, F.R.C.S. Irel. London: J. and A. Churchill. Pp. 72. Price 2*s.* net.—This little book is designed to afford the practitioner of medicine short and practical directions for carrying out such of the

important clinical laboratory methods as can be done without special laboratory facilities. It deals chiefly with the analysis of urine, gastric contents, and fæces. A short section is devoted to the examination of the blood, but as this deals only with the diagnosis of syphilis by means of a modified Wassermann's test, with the agglutination tests for Mediterranean fever and enteric fever, with certain tuberculin tests, and with hæmoglobin estimation, it is obviously incomplete. The other sections contain descriptions of the ordinary methods of qualitative and quantitative analysis of the substances mentioned above. Some of the quantitative methods are described with the use of simple and ingenious apparatus, though some of the processes included, for example the Cammidge pancreatic reaction, are likely to occupy more time than the average practitioner can afford. On the whole, the book should be of use in carrying out some special analyses where expert help is not obtainable, but its title is a somewhat ambitious and misleading one.

Die Therapie an den Berliner Universitäts-Kliniken. (Therapeutics in the Clinics of Berlin University.) Edited by Dr. WILHELM CRONER. Fifth edition. Berlin: Urban und Schwarzenberg. 1911. Pp. 732. Price 12 marks.—The object of Dr. Croner in issuing this work was to present to practitioners and students the various methods of treatment employed in the clinics in connexion with Berlin University. The book covers a very wide range, for not only are the morbid conditions that are usually classified under the headings of general medicine and surgery considered, but sections have been written on the treatment of mental diseases and on diseases of the eye, ear, skin, nose, throat, and on gynæcology. In this edition a section on the treatment of syphilis has been added, in which the method of employment of "606" is described. Each chapter has been written by different authors, and some well-known names are represented among them. Professor His, Professor Kraus, and Professor Senator write on internal medicine; Professor Bier and Professor Hildebrand on surgery; Professor B. Fränkel on diseases of the throat and nose; and Professor Heubner on diseases of children. To condense such a vast amount of information into one volume necessitates great brevity in each subject, and the value of the work has suffered accordingly. The descriptions of the various therapeutical measures to be adopted in the different maladies considered in each section amount to little more than suggestions and hints. To medical practitioners the work has proved of value for rapid reference, for it is in a fifth edition, but students will probably receive but little useful instruction from a perusal of its pages.

The Story of the Bacteria and their Relations to Health and Disease. By T. MITCHELL PRUDDEN, M.D. Second edition, revised and enlarged. Illustrated. London and New York: G. P. Putnam's Sons. Pp. 232. Price 3*s.* 6*d.*—The recognition of the vast importance of the part played by bacteria in disease and in various economic processes naturally has brought them to a considerable extent into the public eye. Scientific works on bacteriology are, of course, out of the question for the everyday reader, and so ideas of the most misleading character and of quite an alarmist nature are current about "germs." Dr. Prudden has succeeded in making a fascinating story of the subject in plain language and free from all unnecessary technicality, and that his story is appreciated is borne witness to by the fact that this is the second edition of the book. For the medical student it will invest his bacteriological course with an interest that, unless he has a strongly scientific temperament, he may otherwise fail to find. The same may be said of those practitioners whose work is remote from laboratory methods. The school teacher should certainly find it useful, and it can be commended for general reading.

Notes on Dental Metallurgy. By W. BRUCE HEPBURN, L.D.S. Glasg. London: Baillière, Tindall, and Cox. 1911. Pp. 214. Price 5*s.* net.—Dental metallurgy now includes the majority of metals the ordinary properties of which are studied in the chemistry classes, but their special properties as applied to dental practice must form, of course, the subject of separate attention. These notes amount in a large measure to a consideration of the properties of alloys or amalgams, besides certain salts used as cements. Mr. Hepburn writes with personal experience of his subject, and the student can gain considerably by this experience by reading the book carefully. One chapter, which is full of interest and suggestion, is that on the behaviour of metals in the mouth. Besides, there are sections of value to the general dental practitioner, notably one dealing with the composition of useful and valuable alloys. We regard this little work as a practical contribution to a very important subject.

The Public Schools Year Book, 1911. Pp. 751. Price 3*s.* 6*d.* *The Schoolmasters' Year Book and Directory, 1911.* Pp. xxiv.–1122. Price 12*s.* 6*d.* London: Swan Sonnenschein and Co., Limited.—The "Public Schools Year Book" is now in its twenty-second year of publication and contains a large amount of information of interest to both parents and schoolmasters. Full information is given with regard to the governing bodies of schools, the staff, entrance examinations, scholarships, fees, and so forth, together with lists of preparatory schools and tutors. Brief accounts of the training necessary for entry into the various professions and the Civil Service are included, and there is an article on Colonial Openings for Public School Boys. Lists of school periodicals, boys' clubs, and the educational publications of 1910 add to the value of a very useful work of reference. Similar information can be found in the "Schoolmasters' Year Book," one of the features of which is a directory of the masters in secondary schools and other persons connected with education. Parents will find this book also of considerable assistance both in selecting a school and in deciding upon a career for their sons.

Letters from Miss Florence Nightingale on Health Visiting in Rural Districts. With a Prefatory Note by Sir LAUDER BRUNTON, Bart., F.R.S., M.D. Edin. London: P. S. King and Son. 1911. Pp. 61. Price 3*d.*; post free 4*d.*—This is a reproduction of a printed report originally submitted to the Bucks county council in 1892. As Sir Lauder Brunton says in his prefatory note, "There are many who do not know that her [Miss Nightingale's] work in the Crimea, great though it was, is probably a good deal less than what she effected since." This pamphlet contains information as to the methods of work of the health visitor, an organisation that took its inception from Miss Nightingale. It contains eminently practical syllabuses for the instruction of trained health visitors and a summary of a scheme for health-at-home training which will be serviceable to social workers of all kinds. Miss Nightingale in one of the letters emphasises the fact that we must not mix up nursing the sick with health in the home. The training for maintaining the latter requires different, but not lower, qualifications.

Home Nursing. By E. MARGERY HOMERSHAM. London: Allman and Son, Limited. 1910. Pp. xxiv.–92. Price 3*d.* — It is astonishing what a lot of small practical details Miss Homersham thinks of in this book—details so trivial as to seem hardly worth mentioning, yet all calculated to contribute their mite towards the sick person's comfort. This edition is revised and enlarged, and gives ample instruction about baths, disinfection, monthly

and surgical nursing, diet, &c. Even the poorest household would expend threepence on it to great advantage.

The Coronation Regalia: An Excursion into a Curious Bypath of Literature. By W. H. STACPOOLE, B.A., LL.D., of the Inner Temple, Barrister-at-Law. London: Whitaker's Almanack Office. 1911. Pp. 109. Price 1s.—This little book gives an interesting account of ancient and modern regalia, the place of coronation, the origin of crowns, St. Edward's Crown, the Coronation Stone and chairs, and the other articles of regalia, the result of an investigation of a mass of miscellaneous literature, historical, archæological, and controversial. It will naturally be of interest at the present time.

JOURNALS AND MAGAZINES.

Quarterly Journal of Microscopical Science. Edited by Sir RAY LANKESTER, K.C.B., M.A., D.Sc., LL.D., F.R.S. Vol. LVI., Part 2. February, 1911. London: J. and A. Churchill. Price 10s. net.—This number contains a memoir on the Morphology of the Cranial Muscles in Some Vertebrates, by Professor F. H. Edgeworth of the University of Bristol; a Monograph on the Tape-worms of the Sub-family Avitellininæ, by Dr. Lewis H. Gough, from the zoological laboratories of the Universities of Basel and Leeds; and some brief notes on the Structure and Development of Spirochæta Anodontæ (Keysselitz), by Dr. W. Cecil Bosanquet.

Professor Edgeworth's object has been to determine the morphology of the cranial muscles, and deduce a morphological classification of the motor nuclei of the cranial nerves in mammals and man. A subsidiary object was to ascertain what evidence is afforded by the cranial muscles in regard to the speculations of zoologists on the phylogenetic relations of the various vertebrate groups. The paper is a sequel to one previously published by the same author on Some of the Cranial Muscles of Sauropsida.[1] The adult anatomy of the muscles described by various observers merely serves to support deductions as to their homologies already made from considerations of their adult forms. Professor Edgeworth has described and compared the development of the cranial muscles in Scyllium canicula, Squalus acanthias, Acipenser sturio, Lepidosteus osseus, Amia calva, Salmo fario, Ceratodus Forsteri, Triton cristatus, Rana temporaria, Alytes obstetricans, Bufo lentiginosus, Pelobates fuscus, Chrysemys marginata, Lacerta agilis, chick, rabbit, and pig. After a description of the segmentation of the head, the mandibular muscles, the hyoid muscles, the eye muscles of the rabbit, the branchial muscles, œsophageal, laryngeal, and pharyngeal muscles, the muscles derived from trunk myotomes passing to the upper ends of the branchial bars, hypobranchial spinal muscles, and lingual muscles, Professor Edgeworth enters upon some phylogenetic speculations and suggests a morphological classification of the motor centres in the mid- and hind-brain in man. Recalling Gaskell's classification, in which the motor centres are placed in two categories: (1) somatic, a continuation of the anterior column of the cord, innervating the IIIrd, IVth, VIth, part of the VIIth and XIIth somatic groups; (2*a*) non-ganglionated splanchnic, a continuation of the lateral column of the spinal cord, innervating voluntary splanchnic muscles, Vth (motor root), Vth (motor descending root), VIIth, IXth, Xth, part of the XIth; (2*b*) ganglionated splanchnic, a continuation of Clarke's column, IIIrd (G. ciliare), VIIth (N. intermedius, with gang. genic.), IXth (gang. petros.), Xth, XIth (gang. trunci vagi), XIIth (gang. hypoglossi), the author of the memoir under review classifies the motor nuclei of the cranial nerves into (1) somatic, innervating muscles derived from the myotomes of the cerebral, and three anterior body segments; and (2) splanchnic, innervating muscles, derived directly or indirectly from the walls of the cephalic cœlon. In the somatic group he includes IIIrd (external ocular muscles), IVth (superior oblique), VIth (external rectus), Vth (temporal, masseter, pterygoids, tensor tympani, anterior digastric), VIIth (posterior digastric, stylohyoid, and stapedius), IXth (interarcualis ventralis I.s. branchiohyoideus when present), Xth and XIth medullary (interarcualis ventralis III.s. interthyroideus in Ornithodelphia), XIth spinal (sternomastoid and trapezius), XIIth (hypobranchial spinal muscles, and lingual muscles derived from the geniohyoid). In the splanchnic are included that part of the motor nucleus of the Vth which innervates the mylohyoid; that part of the VIIth which innervates facial and platysma muscles, part of the motor nuclei of the IXth, Xth, and XIth medullary, which innervates the tensor and levator palati, palatoglossus, stylopharyngeus, pharyngeal constrictor, laryngeal muscles, and crico-thyroid. The primary cranial nerves are the IIIrd, Vth, VIIth, IXth, and Xth, the primary dorsal position of their motor nuclei, the dorso-lateral emergence of their motor with their sensory fibres, and the relationship of the issuing nerves to the corresponding myotomes being related phenomena. In the body region anterior nerve roots are secondarily developed in co-relation with the upgrowth of the myotomes to the mid-dorsal line and the posterior roots become exclusively sensory. In the head where this upgrowth does not take place, or to a very limited extent, a more primitive condition persists, both in the position of the motor nuclei, and in the emergence of the efferent fibres. The ancestry of mammals has been the subject of inquiry and speculation for many years. Two theories have been held: one, that mammals are descended from Sauropsida, the other that they are descended from Amphibia. As regards the cranial muscles mammals resemble Amphibia and differ from Sauropsida in certain characters, whilst they resemble Sauropsida and differ from Amphibia in certain others. In discussing the individual groups of muscles Professor Edgeworth has suggested that all the former features of resemblance are primary ones, whereas all the latter are secondary characters, and he thinks they might have been independently acquired. The morphology of the cranial muscles is thus in favour of an amphibian ancestry of mammals. The paper is illustrated with 100 figures in the text and is of the most complete and convincing character.

Dr. Lewis Gough's monograph on the tape-worms of the sub-family Avitellininæ is a revision of the genus Stilesia, and an account of the histology of Avitellina centripunctata. Fuhrmann in 1908 placed Stilesia together with Thysanosoma in a new sub-family, which he called Thysanosominæ, but in view of the better known histology of these genera and that of Avitelina that is the result of Dr. Gough's investigations, it is necessary to review their position and to separate them. The points in which they agree are, in his opinion, hardly of sufficient importance to weigh very heavily, whilst the lack of a vitellogene gland and shell gland, which characterise Stilesia and Avitellina, is quite sufficient to separate the two genera from all other known cestodes. He therefore proposes to separate them from the Thysanosominæ and place them in a new sub-family of the Anoplocephalidæ, calling the new sub-family Avitellininæ. The characters of this group are as follows: Scales without hooks, with four suckers; segments short, genital pores irregularly alternating, testicles in two or four groups, marginal, none in the middle field; a single ovarium, no vitelline gland, no shell gland; uterus single or double, eggs finally enclosed in a

[1] Quarterly Journal of Microscopical Science, vol. li.

paruterine organ; eggs in ovary and uterus surrounded (and nourished) by nutritive cells; onchosphere with two envelopes. All the known species inhabit ruminants. The remainder of Dr. Gough's paper is taken up with a full and detailed description of the histology of Avitellina centripunctata (Rivolta). This is illustrated by two beautiful plates, a feature which places this journal in such high estimation amongst its readers.

In the article by Dr. Cecil Bosanquet there are described and figured the microscopical appearances at various stages of the large spirochæta which occurs in the fresh-water mussel—Spirochæta anodontæ (Keysselitz). The point which may be of medical interest is the breaking up of this spirochæta into a number of small rounded bodies like cocci, which he has observed to occur in certain circumstances. He finds that specimens taken from the crystalline style of the mussel stain homogeneously like bacteria. Those, however, which are present in the stomach of the mollusc, especially after the style has been dissolved, show beading of the substance of the organism, as is depicted by Keysselitz in his original memoir.[2] Since the style is apparently the most favourable medium for the life of the spirochæta Dr. Bosanquet is inclined to look upon the beaded forms as either involutionary or developmental. He dissolved a piece of crystalline style in tap-water, and sealed the preparation with vaseline for 48 hours under a coverslip on a slide. "At the end of this period," he says, "the cover was removed and the preparation was fixed in osmic vapour and stained with thionine. The spirochætes which had originally been very numerous, were found to have almost entirely disappeared, while their place was taken by elongated variously curved bodies, closely corresponding with them in length and thickness, containing irregular masses of staining substance. Some definite spirochætes present showed beading of protoplasm and separation into segments." Leishman has described a similar breaking up of Spirochæta duttoni, the infective agent in tick fever, into coccoid forms within the tick. An isolated observation of this kind is not by any means sufficient to warrant the conclusion that these are instances of development or involution, but it is possible, as the author suggests, that the beaded forms described in connexion with several pathogenic spirochætæ—forms which are usually regarded as degenerative—may in reality be stages in the development of the organism by a process of multiple fission, a process preparatory to infection of other molluscs, since within the mussel the spirochæta usually multiplies by binary fission. If a process of multiple fission occurs in the development of Spirochæta pallida it will be easier to explain the reported passage of the infective agent through a porcelain filter, and also the infectivity of some specimens of syphilitic material which are apparently free from spirochætæ.

The Child.—In the March issue Dr. T. H. C. Stevenson discusses the relation of the coming census to child problems. Dr. John J. Buchan, in discussing the declining birth-rate, says that the requirements of civilisation in the last half century with respect to the bringing up of children have increased at a much faster rate than agencies have developed to help the parents to rear and maintain them. Our factory, education, and medical legislation have all augmented the duties of parents without affording them corresponding relief. The classes who appreciate to the full modern ideas of parental responsibility, and who attempt to carry out their duties faithfully to their families, are the classes in which the decline in the birth-rate has occurred. There is little fall in the birth-rate among those who are ignorant or indifferent to their responsibility, or among the wealthy classes who are able financially to perform their duties in accordance with their conception of parental responsibility. Dr. R. Milne discusses the medical supervision of children in orphanages and similar institutions. Mr. John Collier considers the relation of motion pictures and the child as the problem appears in America, where the larger part of the audiences consists often of young children. These pictures have caused many thousands of children to become aware of social conditions—the vague unrest that is expressed in the Divorce Court, the white slave evil, that young men become gamblers and burglars under the temptations of city life—which otherwise they would have encountered only at a maturer age; and in answer to the question whether this is good he answers that it depends on the way it is done. He pins his hope on a censorship of pictures resting on mutual confidence between the National Censorship Board, operating as a volunteer organisation, and the manufacturers, such as now exists in the United States. Other articles are the Crime of Cruelty to Children, by Robert J. Parr; a Child's Birthright, by the Hon. Albinia Brodrick; and Child Welfare and the Rationalisation of Spelling, in which Professor Skeat urges that children can learn the present irrational system, if preceded by a rational one, in less time than the present irrational system alone. The "Child Problem" of the issue, Athletics and School Life, is discussed by Mr. Oscar Browning, Mr. W. H. Bowen, Dr. C. W. Haig-Brown, Dr. Mary A. D. Scharlieb, Dr. Robert Jones, Dr. Clive Rivière, Dr. Athelstane I. Simey, and Dr. David Forsyth. Dr. Greville Macdonald writes about his father, George Macdonald. Dr. Sidney Pearson discusses congenital pyloric stenosis from a purely medical point of view.

The Photographic Monthly.—The January, February, and March issues of this journal, which is devoted to technical and pictorial photography, and is published by Messrs. Routledge and Sons at the price of 2*d.* monthly, contain a series of articles on the Elements of Microphotography. The subject is one in which many medical men are interested, and the various hints with respect to the selection of apparatus, the best kind of objectives and eye-pieces for the work, illumination, dry plates, and so forth, will be found helpful. The articles are well illustrated.

[2] Arbeiten aus dem Kaiserlichen Gesundheitsamte, 1906.

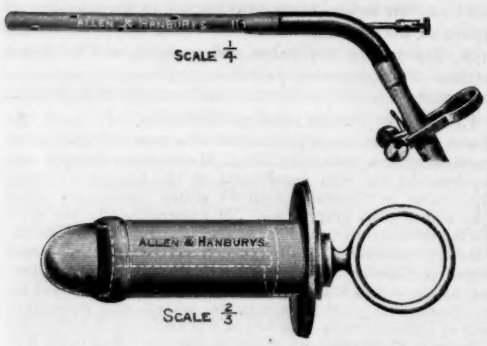
LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill announce the publication of a new "Text-book of Diseases of the Skin," by Dr. J. H. Sequeira, lecturer and physician to the skin department at the London Hospital. The volume is illustrated with 44 plates reproduced direct from colour photographs, and 179 illustrations in the text. The latest results of treatment of syphilis by "606" are given. —Messrs. Baillière, Tindall, and Cox announce that the new edition of Green's "Pathology" will be ready for publication by the end of the month. It has again been revised by Dr. Bosanquet, much new material added, and rearrangement of subjects made. Its *format* has also been modified for inclusion in the University Series of Manuals. The price will be 15*s.* net instead of 18*s.* net as hitherto.

MIDDLESEX HOSPITAL: THE PRINCE FRANCIS OF TECK MEMORIAL FUND.—H.S.H. Prince and H.R.H. Princess Alexander of Teck have promised to give their support on Tuesday evening, April 11th, at the opening of the Scala Theatre, when the entire evening's receipts, without any deduction whatsoever for expenses, are to be given to the late Prince Francis of Teck's Fund for the Middlesex Hospital. The programme promises to be interesting. Mr. Charles Urban will introduce in "Kinemacolor" a process which is said to reflect life in its minutest detail upon the screen in life's natural colouring. This will be followed by an opera in two acts, composed by Herr Paul Lincke of Berlin, entitled *Castles in the Air*, adapted from *Frau Luna*. The stalls will be 21*s.* and 10*s.* 6*d.*, the rest of the house is priced as usual, and tickets can be got at all box offices.

New Inventions.

A NEW RECTAL ELECTRODE FOR THE TREATMENT OF ULCERATION OF THE LOWER BOWEL BY IONISATION.

THE intractable nature of chronic rectal ulceration and the really brilliant results of zinc ionisation, in spite of the imperfections inherent in the only apparatus at the disposal of those who have made use of it, have encouraged me to attempt to design an electrode especially for the purpose, which may be found more useful than the makeshifts with which the surgeon has hitherto been obliged to content himself. To what extent I have succeeded must be left to the judgment of the profession. For the purpose of ionisation it is necessary to apply to the part to be treated a layer of fluid holding in solution the active salt of the metal used. Upon the skin this is managed by the application of several thicknesses of lint or cotton-wool wet with the solution and covered with a plate of the metal the salt of which is being utilised. Within the rectum we are confronted with the difficulty that not only is it impossible from want of space to have anything like the thickness of lint or wool necessary, but also that the difficulty of introducing a lint-covered rod, which must not be lubricated with vaseline, is quite considerable. A roll of lint an inch or so in diameter does not easily pass a tight sphincter or find its way comfortably up the rectum. Moreover, even if introduced through a speculum it is practically impossible to pack in enough material to secure good contact over the whole of the interior of the rectum. Most of these drawbacks are, I venture to hope, obviated in the electrode which I am now about to describe, which is an improvement and simplification of one already introduced by me. In this electrode the tube containing the metallic conductor is surrounded by a bag of a watertight material, permeable by the electric current, is introduced into the rectum in a collapsed condition, is then pumped full of the solution used, and applies itself accurately to the interior of the rectum. My electrode consists essentially of a tube of vulcanite curved near its proximal extremity, which carries a short length of rubber tube armed with a strong laboratory clip. A straight rod of German silver furnished proximally



with a binding screw enters the tube at the convexity of the bend, passes right through, and emerging at the distal end is prolonged into a spiral some six inches long. Over the spiral and distal end of the vulcanite tube is fitted a perforated rubber tube with closed extremity. Over this in its turn is drawn an elongated bag of animal membrane prepared from the cæcum of animals and readily obtainable as articles of commerce. The mouth of this is tied tightly or secured by an elastic band to the underlying tube. The introduction of this electrode is effected by a special introducer, which consists of a miniature speculum furnished with an obturator, and of such a form as to be self-retaining. It is composed of, or lined with, non-conducting material, so as not to convey any current from the electrode to the sphincter, which is very sensitive. Without the introducer the bag would probably be torn by the sphincter during introduction. The technique for the use of the electrode is as follows. The patient lying upon his left side with a large flat electrode connected with the positive pole of the source of electricity beneath him and kept in position by his weight; the introducer is warmed, lubricated, and passed through the anus. The obturator is now withdrawn. As much air as possible is expelled from the membranous bag by drawing it through the fingers, the clip being open to allow its escape and lubricated with a non-greasy lubricant, such as "K Y." It is now passed through the introducer to its full extent by a gentle twisting movement. The nozzle of a large ball enema containing a 2 per cent. solution of zinc sulphate is inserted into the end of the short rubber tube, the clip being opened by pressure with the fingers of the left hand, and the fluid slowly injected until as much has passed as will enter easily. The clip is then released and the nozzle of the enema withdrawn. As an alternative the bag may be filled from a funnel which is held by a nurse a couple of feet above the patient. The cord attached to the positive pole of the source of electricity is now attached to the binding screw of the electrode. The current is now gradually turned on until the required number of milliampères is passing, and continued for the length of time determined upon previously. The current is then gradually decreased to zero and the application is finished. A basin is now held under the open end of the rubber tube to catch the solution, the clip is opened, and both electrode and applicator are withdrawn together. As regards the source of electricity, we may use a battery of 32 or more cells, or one of the modern earth-free rotary generators, either being furnished with an efficient galvanometer and rheostat. After use the membranous bag should be inflated with air through the rubber tube and the clip adjusted to retain it. The inflated bag can now be well washed with soap and cold water and the whole hung up to dry, after having been gently wiped with a soft cloth. If treated in this manner the bag will serve for a considerable number of applications. In addition to its use in ionisation I have made extensive use of this electrode in the treatment of atonic constipation by means of the monophase or triphase sinusoidal current.

The apparatus is manufactured by Messrs. Allen and Hanburys, Limited, of Wigmore-street, London, W.

Harley-street, W. GEORGE HERSCHELL, M.D. Lond.

GIFT TO A COTTAGE HOSPITAL.—The Jubilee Cottage Hospital at Colne, erected at the cost of Sir William Hartley, has received from him the offer of a sum of £4500 for its enlargement on condition of a local provision of an equal sum for its endowment.

LEICESTER INFIRMARY.—The 138th anniversary meeting of the governors and subscribers of the Leicester Infirmary was held on March 22nd, the Mayor, Alderman W. W. Vincent, presiding. Sir Edward Wood, in moving the adoption of the report, said that the number of patients last year was 3358, an increase of 130 on the previous year. There were 12,856 new out-patients, and including those on the books the total attendance for treatment during the year was 43,803, the number of accidents was 13,284, and the total attendances for re-dressings, &c., were 46,509. The ordinary expenditure last year—namely, £21,071—was larger than in any previous year. The new X ray department was opened by the mayor on the same day in the presence of a large gathering. The original department, started in 1899, consisted merely of an X ray coil, an X ray tube, and two storage batteries. The present equipment includes a dynamo of 100 volts, continuous current, which can be started and stopped by pressing a button in the X ray room. The coil overhead gives a spark of 14 in. Thin lead glass on the X ray tubes protects the patient, and allows the rays to pass out only through a small opening. There are two rapid interrupters. The couch is designed after the pattern of a four-post bedstead with tubes below and above, so that the examination may be made in any position. There is also a diascope for viewing the patient in the vertical position for examination of the heart, lungs, and abdomen. There is a time-switch for seconds and tenths of seconds, electrically worked, so that accurate exposures may be obtained, and it is hoped and expected that the time taken to get a radiogram of a shoulder may be reduced to 10 or 15 seconds with ease, or if desired instantaneously.

THE LANCET.

LONDON: SATURDAY, APRIL 8, 1911.

Compulsory Notification of Pulmonary Tuberculosis: The New Regulations of the Local Government Board.

THE Public Health (Tuberculosis) Regulations, 1908, provided for the notification of pulmonary tuberculosis occurring amongst the inmates of Poor-law institutions or amongst persons under the care of district medical officers. From the experience gained since that time the Local Government Board considers that the principle of compulsory notification has been justified, and it has decided to extend the sphere over which that principle shall act. An Order (see p. 957) has now been issued embodying further regulations to provide for the notification of pulmonary tuberculosis occurring amongst the in-patients or out-patients at hospitals, or other similar institutions for the treatment of the sick, which are supported wholly or partially otherwise than by the contributions of the patients (or of their relatives or guardians), and otherwise than from rates and taxes.

The new regulations will come into operation on the first day of May of this year, and they will "then and thereafter apply and have effect throughout England and Wales, and shall be enforced and executed by every council and their officers." According to these regulations a medical officer of any hospital, within the period of 48 hours after his first recognition of pulmonary tuberculosis in a person upon whom he is in medical attendance at the hospital, must complete, sign, and transmit a notification of the case in the form shown in the special schedule to this Order to the medical officer of health for the area within which the hospital is situated. The duties of the medical officer of health are defined, and the introduction of this measure will in all probability considerably add to his already responsible duties. In a circular of the Local Government Board which accompanies the regulations especial attention is drawn to the instruction that the notification is to be sent to the medical officer of health for the area in which the hospital is situated. If that officer receives a notification relating to a patient whose residence as described in the notification is not within the area for which he is medical officer of health he must at once transmit the notification to the medical officer of health for the area in which the patient's residence appears to be situated, at the same time informing the medical officer of the hospital that he has done so. This regulation throws the responsibility of ascertaining the residence of the patient from the hospital authorities on to the public health officials, thus rendering the task of the hospital officers a more easy one, and in the unavoidable pressure of out-patient work it would be difficult to determine the medical officer of health to whom the notifications should be sent. One of the main objects of these regulations is to ascertain the localities in which the incidence of pulmonary tuberculosis is greatest, but in addition certain beneficent and practical regulations have been introduced in order to prevent the spread of the disease and assist the patients themselves. Thus not only will the necessary appliances for disinfection and for the collection of the sputum be provided, but, according to the circular, "the Order will allow of the provision of appliances or apparatus such as temporary shelters with the necessary furniture and utensils for the use of the patient; and by these means patients may sometimes be treated at their homes under suitable sanitary conditions, or continue treatment at home after a short stay in a sanatorium." Further, the medical officer of health "may appoint such officers, do such acts, and make such arrangements as may be requisite for giving advice and for carrying out the provisions of these regulations."

The thorough and practical manner in which this scheme has been evolved cannot but command approval, but at the same time there are weak points in it, and experience alone can show whether they will seriously detract from the benefits which these proceedings are intended to bestow on the community at large. In commenting on the regulations issued in 1908[1] we mentioned some objections which we considered required serious consideration. We pointed out that a somewhat dangerous weapon was being placed unreservedly in the hands of the local authorities, and stated that we should have felt more secure had greater control been left in the hands of the Local Government Board. Public opinion on medical matters sometimes runs to extremes owing to the difficulty of properly estimating scientific facts. The employers of labour may say that if pulmonary tuberculosis is so infectious as to require notification it would not be right that they should have any person in their employ who is affected with that disease, and any unfortunate servant who had been to a hospital and been notified as being tuberculous would be discharged and find it very difficult to secure other employment, although, owing to the precautions taken, the risk of infection could be reduced to a minimum. Knowing of such a possibility, the sufferer from the disease might postpone seeking medical advice until the disease had reached such a stage that the prospects of arrest might be seriously diminished. Or, instead of applying at a public hospital, he might resort to some plausible quack who would not be compelled to notify him to the local authorities. It is true that a clause exists in the regulations to the effect that a medical officer of health is not authorised or required "to put into force with respect to any patient ..... any enactment which ..... subjects the patient to any restriction, prohibition, or disability affecting himself or his employment, occupation, or means of livelihood on the ground of his suffering from pulmonary tuberculosis," but we are afraid that it would sometimes be difficult to keep the fact of notification with such secrecy that it should not come to the knowledge of the employer. Moreover, some

[1] THE LANCET, Jan. 9th, 1909, p. 115.

employers might consider that they have a further justification in discharging an employee thus affected, since several cases have now been before the courts in which a man who has met with an accident and subsequently has been found to be suffering from pulmonary tuberculosis, has sought to ascribe the disease to the accident, or to seek for compensation on the grounds that the accident has aggravated the disease; hence it would be argued that apart from risk of infection to his fellow workers, the employers lay themselves open to a serious action should the notified individual meet with an accident, and the tuberculous disease subsequently be found to have acquired increased activity.

The responsibility under the new regulations which will rest with the medical officers of hospitals will also be no light one. According to the wording of the regulations notification must be made after the "first recognition of pulmonary tuberculosis." That is, we presume, after the diagnosis has been definitely established. In a large number of cases this will necessitate an examination of the sputum; indeed, although in the circular the expression "occasional" is used with regard to this procedure the word "systematic" would have been more in place. At any rate, in order to avoid an error that might arise in diagnosis the number of examinations of sputum will be largely increased, but the Board does not suggest any remuneration or reward to the hospitals for the extra demands upon the workers in the laboratories. The regulations being the order of a Government department the medical profession will be secure against any action by the patients taken on account of the fact that they have been notified as being the subjects of an infectious disease. The result of the practical application of these regulations will be watched with interest, for action in accordance with the new order of the Board will not always be easy, and will often weigh heavily upon individuals. If the benefits derived outweigh the drawbacks, as they should, a far-reaching prophylactic measure will have been established.

Social Reform and Personal Service.

SOCIAL reform is the dominating question of the day. The words taken in their widest sense cover an enormous field of ground and a variety of subjects involving problems by no means easy of solution. That life might be made happier, less strenuous, and less difficult for a large majority of the people of these islands is a truism which needs no proofs to make it plain. Neither is there any lack of proposed remedies for the acknowledged diseases of the body politic. Old age pensions, reform of the Poor-law, sickness and unemployment insurance, enforcement of "the right to work"—all have been prescribed by political physicians, and one at least is in active operation. It is not within our province to descant upon the relative merits or demerits of individualism and collectivism, but it is good to remember at least two social reformers who gave their personal service to their fellows, and their memory has been recently revived by the appearance of a little book entitled "Reminiscences and Letters of Joseph and Arnold Toynbee."[1] The work of JOSEPH TOYNBEE, the father, as an aurist is, or should be, known to every medical man. He it was who, as has been well said, "raised aural surgery from a neglected condition of quackery to a recognised position as a legitimate branch of surgery," and a visible monument of his knowledge and industry exists in the magnificent collection of preparations illustrating disease of the ear now in the Museum of the Royal College of Surgeons in Lincoln's Inn-fields, a collection the result of minute dissections extending over a period of 20 years. But TOYNBEE was not only a surgeon; he was untiring in his advocacy of social reforms, such as working men's dwellings, preservation of open spaces, and sanitation, at a time when public health was little more than a name despite the labours of men like CHADWICK and SOUTHWOOD SMITH. Notwithstanding the cares of a large practice, TOYNBEE was always giving popular lectures upon health matters, and at Wimbledon, where he had a country house, he founded a village club at which penny readings were given and also a local museum, being convinced, in his own words, that "local museums will become a noble feature of the country." His letters show the private side of the mind of a man devoted to his family and one filled with the desire to benefit his fellows.

Such a man as JOSEPH TOYNBEE being the father, it is no wonder that the son, ARNOLD TOYNBEE, should have grown up with a trend towards social reform, although it was the influence of T. H. GREEN which seems to have finally decided his career. Despite his delicate health, he worked unsparingly both at Oxford and elsewhere. In Whitechapel he laboured among the poor, and in addition he delivered many popular lectures on industrial questions in such centres as Bradford, Newcastle, and Leicester. It was after his example as well as in his memory that Toynbee Hall was founded, the first of the now numerous university and public school settlements which are influencing the common life of our large towns to-day. Nor are the universities and public schools alone among societies in the good work, for many organisations of the same kind are supported by various religious bodies and others. In all these, however, the ideal of personal service is ever to the front, and this ideal it is which there is a danger of losing should collectivism pure and simple take the lead in the future. Personal service in aid of our fellow creatures is nothing new; it was to this that the Franciscans in their early and brightest days owed their powers for good. They it was who sought out the poor, the outcast, and the leper. "He" (St. FRANCIS) "appointed that the friars of his order dispersed in various parts of the world, should for the love of CHRIST, diligently attend the lepers wherever they could be found. They followed this injunction with the greatest promptitude." The leprosy of the Middle Ages has practically disappeared from these islands, but there is still the leprosy of poverty, of hopelessness, of the craving for alcoholic stimulants which is the direct outcome of that hopelessness, of the hard, dull life of unremitting toil, and the ever-present shadow

[1] Reminiscences of Joseph and Arnold Toynbee. Edited by Gertrude Toynbee. London: Henry Glaisher. Pp. 193. Price 2s. 6d. net.

of unemployment. All these, like the grim shapes which guarded the gate of VERGIL'S Hades,

> "Morbi, tristisque Senectus,
> et Metus, et malesuada Fames, ac turpis Egestas,"

are ever present to the poor man, and it is against spectres such as these that institutions like Toynbee Hall offer protection. There is no compulsion to be made better or happier, those who attend do so of their own free will, and, moreover, a process of natural selection is at work, for it is only those who have the aspiration towards higher things that have the energy to avail themselves of such aids as evening classes and lectures. Thus the best men are lifted out of the rut of poverty and hopelessness, and the spark of personal ambition which is just alight within them is fanned into a flame. Neither are the benefits all on the side of the poor, for those who give their services—the clergy, the lawyers, the physicians, and the ordinary educated laymen—come into touch with their fellows of a class to which they would otherwise be strangers. Thus the divisions between class and class are narrowed, either side learns from the other, and the feeling of personal help is mutual. It is this intense personal zeal which is evident in the TOYNBEE letters, and it is for the preservation of this we hope to see future legislation for social reform take thought.

Modern Views of Hysteria.

THERE is probably no disease which is capable of exciting greater differences of opinion than that to which the name hysteria is given. No doubt much of this conflict of view is due to the use of the word, for, even among those who have most deeply studied the subject, the connotation of the word is widely different, and phenomena which by some are denominated hysterical are said by others to be incorrectly so defined. In this country comparatively little of an authoritative character has been written on the nature of hysteria. Much, however, has been done to rescue from that category, and to relegate to their appropriate pigeon-holes, many classes of true organic nervous disease. Probably the two most striking instances of this are the numerous cases of ill-defined disseminated sclerosis which 20 years ago were almost invariably regarded as hysterical, and the even more important, because so much more tragical, cases of myasthenia gravis to which acuter attention has been given more recently. But it would seem that now hysteria, as a definite disease, is exciting more interest among English neurologists, and nothing is more calculated to stimulate and develop and direct this interest than the number of *Brain* which has been recently published. This number constitutes almost a symposium on hysteria, for it contains Dr. J. A. ORMEROD'S address, as President of the Neurological Section of the Royal Society of Medicine, on "Two Theories of Hysteria," an able and scholarly yet critical examination of the views of Professor JANET of Paris and Professor FREUD of Vienna; and, no doubt through a happy inspiration of the editor, Dr. H. HEAD, a paper by Dr. S. A. K. WILSON on "Some Modern French Conceptions of Hysteria," and a systematic account of "Freud's Conception of Hysteria" by Dr. BERNARD HART. All these papers show a wide and intimate acquaintance with the subject on the part of their authors. Even the early writers who regarded the hysterical condition as dependent upon the actual vagaries of the womb round the body recognised the two aspects of the disease—the physical, consisting of convulsion, contractures, and paralysis, and also the psychical, consisting of mental peculiarities and emotional disturbances; and the later views which still clung to disturbances of the generative organs and functions as the cause, and invoked ovarian pressure and the regulation of menstruation for its cure, recognised this double aspect of the symptomatology. And this peculiarity of the disease, which naturally leads some of its investigators to attach most importance to the physical side, while others lay undue stress upon the psychical, is no doubt accountable, in some degree at least, for the complete failure that has so far attended all efforts to arrive at a really satisfactory clinical account of the disease, far less at anything like a convincing theory of its causation. This "infinite variety," while it satisfies all, is a snare to all, and as Dr. WILSON remarks: "To the individual who is not so absorbed in science as to lose his sense of humour it may seem that hysteria, the while she responds so nobly to the appeals of the advocates of the various theories, is quietly smiling in her sleeve!"—and remaining as elusive as ever.

The three theories which are examined in the papers before us are those of BABINSKI, of JANET, and of FREUD. BABINSKI'S view would seem to be the direct sequel to those of CHARCOT, yet, paradoxical as it may seem, it also constitutes a revolt from the great master. Under CHARCOT'S magnetic teaching his hysterical patients were like clay in the hands of the modeller, and all symptoms were produced at the slightest suggestion. Consequently the domain of hysteria was widened so as to include not only those who were real sufferers, but those who were responsive to suggestion and even the simulator and malingerer. BABINSKI, recognising the curious conglomerate which had come together under the name of hysteria, set himself, if not to define, at least to limit the symptomatology. He denied that the so-called stigmata are characterised by any fixity, and he asserted that symptoms like hemianæsthesia and visual contraction are conspicuous by their absence. He even asserted that in 100 consecutive cases of hysteria he had failed to find hemianæsthesia in a single patient! Yet although BABINSKI'S work may seem to be destructive, this destruction is really with the view of arriving at a definition of hysteria. Such a result is finally reached by contending that the manifestations of hysteria have only two attributes that are essential—the property of being reproducible by suggestion and the property of disappearing under the extensive use of persuasion. This, of course, is not a definition, but merely a statement of certain conditions which any definition must fulfil. He finally defines it as "a special psychical state capable of giving rise to certain disturbances with characters of their own: it manifests itself principally by primary symptoms and by secondary or accessory symptoms. The former can be reproduced by suggestion, with rigorous exactness in certain subjects, and can be made to disappear under the sole influence of persuasion. The secondary symptoms are strictly subordinated to the primary ones." It

will thus be seen that in BABINSKI'S view the relation of suggestion to the phenomena of hysteria is an essential one, and probably the strongest objection to its acceptance has been expressed by DUFOUR when he says that "in accepting the definitions we define a disease by the relation between the patient and physician, thereby employing therapeutic rather than etiological terms." Such an objection would seem to be unanswerable.

The two other theories have underlying them the conception that besides the ordinary mental phenomena—perceptions, feelings, and thoughts of our daily life of which we are all conscious—there are impressions of all kinds pouring in upon us from our own organs and from the outside world, as well as memories and ideas from the past constantly rising up in us, of which we have no personal consciousness. Yet under certain conditions these subconscious ideas may emerge into consciousness. They may also, it is said, group themselves in systems of their own, so that a second self may grow up independent of our known self. This process is called the dissociation of personality. According to JANET'S theory the essential of hysteria is a restriction of the fields of personal consciousness. The hysterical mind can take in much less than the ordinary mind, its comprehensiveness is less, just as the visual field in a hysterical patient is restricted, and when the field of personal consciousness is thus narrowed the subconscious mental conditions tend to become obtrusive. Mental conditions like amnesia—in which strange gaps in memory occur—and physical conditions like a hysterical fit, which is likened to an attack of somnambulism, can both, it is said, be explained on such a theory, and to some the explanation may seem adequate, but to others not so satisfactory. It is further claimed that the theory is competent to throw much light on the nature of fixed ideas and other psychasthenic phenomena. FREUD'S theory, which, it may be said, rests upon the recognition of subconscious mental states, may be described in broad outline almost in Dr. ORMEROD'S words. Every event which appeals to our emotions, and particularly to painful ones such as fear or anger, raises in the mind a disturbance, stress, and strain, which he calls the "affect"; this latter generally finds an appropriate expression in an act of retaliation or perhaps in tears or bad language. But if this does not take place, what happens? A process may occur—it does not necessarily do so—a so-called "conversion of the affect"—some physical and bodily occurrence being provided to take the place of the mental distress. Such bodily act will gradually become automatic, and so a new disease arises, although it is really the "affect" of an old memory. Thus a patient after prolonged weeping on the sudden death of her husband may develop a varying but persistent facial spasm. This power of the conversion of the "affect" is, according to FREUD, a special characteristic of hysteria. When the distressing idea is repressed but the distress persists there results, not hysteria, but a psychasthenia with fixed ideas, phobias, and such like. What, then, are the ideas which give rise to hysteria? The answer to this depends upon the psycho-analysis which is at once a part of the theory and a means of eliciting the facts upon which the theory is based. According to FREUD, these ideas on the repression of which the hysterical condition arises are sexual ideas, but it will at once be understood how dangerous psycho-analysis may become if the analyser has in his mind the idea of getting at some long-buried sexual memory. So that, however much the theory may have to recommend it on psychological grounds, it cannot, for the present at least, be regarded as therapeutically helpful, and we very much doubt whether there is adequate ground for attaching the importance which FREUD does to sexual ideas. It is to be hoped that the perusal of this necessarily brief review will lead many of our readers to betake themselves to the original articles, and we congratulate the editor of *Brain* and his contributors on furnishing English neurologists with a brief but comprehensive treatise on the latest conceptions of hysteria.

Annotations.

"Ne quid nimis."

THE MIND OF A CHILD.

THE story of the seamstress of Montmartre, Marguerite Audoux, is well known to many of our readers, who will have learned from various articles, whether they have read "Marie-Claire" or not, how the author lived her odd, detached childish life, first in a country convent, then upon a remote farm, then again in the convent, until lastly, at the age of 18 or thereabouts, she went to Paris, working amid squalid surroundings and with failing sight, but never, it seems, without a certain inward contentment, as a poorly paid needle-woman. To those who have not read this simple tale we recommend its perusal sincerely—it must have a real interest for medical men. Marguerite Audoux, the seamstress, drifted by accident—such accidents could more easily happen in Paris than anywhere—into a little circle of artistic enthusiasts, limners, sculptors, and men and women of letters, and presently she made to them the shy confession that she, too, had been writing for several years. Then she produced for their criticism the little book "Marie-Claire" which now has made her famous, for M. Octave Mirbeau's words have found echo in many places when he declared that of its kind it is without parallel in French letters. Prefacing a conscientious if somewhat uninspired English translation Mr. Arnold Bennett describes it as a divine accident, and after a careful reading of it, in the light of the author's personal history, few, we think, would hesitate to endorse at any rate the sense of this verdict. Told throughout with delicate reticence, with an admirable, and we must suppose intuitive, selection of the right word and incident, it is difficult to think of any completer and more transparent revelation of a child's growing mind than is here presented to us—Margarie Fleming, had she lived, might perhaps have produced a similar book. This reason alone, apart from its literary interest, may commend it to every medical man whose practice brings him into frequent association with young children. At the last analysis the work is seen to be no more than a very wise arrangement of extraordinarily vivid visual memories; though the fact that the reader instinctively recognises their essential "rightness" shows that they are not merely the records of an extravagant or unhealthy imagination, but the revival, admirably lucid, of impressions common, in kind at any rate, to every childhood. And this is why perhaps, for us who have so largely

forgotten our own childhood, the uncompromising candour with which the little Marie-Claire seizes and sets down the one "off-guard" speech or action that reveals the real man or woman is only less alarming than the serene completeness with which she ignores in them that artificial aura with which most of us half-consciously surround ourselves in the presence of children. There are medical lessons to be learned here, but apart from its genuine value as a study in child psychology, the book throws one or two odd little sidelights upon subjects of more particular medical interest. A quaint passage told so naïvely that the English translator need scarcely have been at pains to leave it out, may be given in illustration:—Sœur Gabrielle, "toute petite, vieille, maigre, et courbée," looked after "les petites" in the convent dormitory, and her custom it was to pass "un bras sec et dur entre notre chemise et le drap, pour s'assurer de notre propreté, et elle fouettait à heure fixe, et avec des verges, celles dont les draps étaient humides." The misery of little sufferers from nocturnal enuresis is just the sort of thing that is forgotten by elders, and until quite recent times these sufferers were treated everywhere with cruelty. A change of method occurred in the memory of Marie-Claire. Sœur Marie-Aimée succeeding Sœur Gabrielle, abolishes the birch, and even before her time there was the good Bonne Esther, anticipating science in her merciful common-sense, who "réveillait celles qui avaient de mauvaises habitudes," during the night to spare them the castigations of the morning. There is again a perfect piece of narrative writing, in which Marie-Claire, grown older, assists at her first pig-killing, and has to hold the bowl for the blood. The farmer puts in his knife, "et je sentis que ma bouche devenait froide et que je n'avais plus de salive ....." the farmer looks up, and seeing her face, bids them take away the bowl. "J'étais incapable de dire une parole, mais je fis signe que non. Le regard si calme du fermier avait chassé mon émotion, et ce fut d'une main ferme que je continuai à tenir la poêle sous le jet qui sortait en bouillonnant." Substitute surgeon for fermier, and retractor for "poêle," and many medical students at their first operation have had the experience of little Marie-Claire, the "regard si calme" of their chief having led them in the end to "continuer" not only unmoved but with an ever-growing and absorbing interest. It can safely be prophesied of the medical reader of "Marie-Claire" that thereafter, for a month or two, at any rate, he will find himself walking more humbly under the candid eyes of his child patients.

MEDICAL BIBLIOGRAPHY.

IT has yet to be discovered whether it would be possible at any time to index the sum of human knowledge as represented in printed books, and to place this index in a position so central that it would be of use to the learned world from one generation to another. The idea of constructing a universal index might well commend itself to a Carnegie of the future, a man of ideals with a purse above the possible demands of ordinary expenditure. Even in a restricted form an index to subjects in the library of the British Museum would prove of incalculable service to learning, both as abridging the often fruitless researches of scholars and as tending to retard the growth of the whole mass of printed erudition, much of which would never have come into being had its authors been aware that they were only repeating what had been better said before. But failing these colossal undertakings, science, and particularly medicine and surgery, may congratulate themselves on being indexed in a manner at once very thorough and likely soon to cover the whole ground. The "Catalogue of Scientific Papers," published by the Royal Society in 1891, is now being reissued in parts. This covers science at large, including anatomy, anthropology, bacteriology, biology, chemistry, physiology, and zoology; while medicine and surgery in all their branches are amply provided for in the vast "Index-Catalogue of the Library of the Surgeon-General's Office, United States Army," together with the "Index Medicus," which is succedaneous thereto. Moreover, an extensive index-catalogue of book titles only, representing a collection not much smaller than the American one, is now in rapid process of completion in the library of the Royal College of Surgeons of England. There is also an admirable index-catalogue at the library of the Royal Society of Medicine. It is not difficult, therefore, for a writer on medical subjects to supply himself with full bibliographical information. The question for him is, Where are the books and papers to which he has obtained references? The researcher in medicine is chiefly concerned with new cases, and these are recorded not so much in text-books as in medical periodical literature. Now in order to assist the researcher in this matter the Medical Library Association, to which reference was made in an annotation in THE LANCET of Nov. 26th, 1910, p. 1570, has for some time been preparing a card-catalogue containing the titles of all the periodicals taken in by the various medical libraries of Great Britain and Ireland. Now that the large contribution is finished which the Royal College of Surgeons' library, with its 300 or 400 periodicals, must necessarily make to such an amalgamated index, the catalogue as a whole will doubtless soon be at the service of the profession. We await with interest the report of progress which the honorary secretaries of the Medical Library Association will doubtless see their way to publishing. In the meantime we are glad to give publicity to some remarks kindly sent us by one of our foreign readers, Dr. Sieveking of Hamburg, who in a letter to us describes the system employed by 19 medical and scientific libraries in Hamburg. The librarians of these send a list of their new acquisitions twice yearly to the medical officer of the city, who keeps a card-catalogue of all their books in his office. This card-catalogue is open to inspection by those engaged in research, and will doubtless in time be printed. A well-compiled list of all the *Zeitschriften* taken in by the Hamburg medical libraries is already in print. It contains some 600 entries, including the leading French and English periodicals, and shows by a simple system of reference where any work can be consulted. We shall doubtless soon have the advantage of a similar system, though it will not be under the management of an officer of health. We give our sanitary departments too much work to allow of contemplating any addition to it.

ACUTE INFLAMMATION OF THE THYROID GLAND.

IN another column we publish an interesting article on Acute Inflammation of the Thyroid Gland by Dr. W. Sibbald Robertson. This is a subject that has received but scant attention in the ordinary text-books and treatises on medicine. It is generally stated that it occurs rarely as a primary disease, but is in the vast majority of cases a complication of one of the acute infections, such as diphtheria, rheumatic fever, pneumonia, scarlet fever, typhoid fever, or mumps. Dr. Robertson gives an excellent account of the disease as it occurs in two forms—those of acute thyroiditis, in which a previously healthy gland is attacked, and those of acute strumitis, in which the gland is already goitrous. The etiology, symptoms, and course of these conditions are fully described, and the differential diagnosis is also discussed. From the fact that so little reference to it is made in general medical literature it would seem to be a rare disease, but Dr. Robertson raises the question as to whether it is not more common than is

supposed. When attention is drawn to a malady usually considered to be uncommon it is sometimes found that its apparent rarity is due to want of knowledge on the part of practitioners in regard to it. Actinomycosis, for example, was at one time thought to be a very rare condition, but further investigations, when its characteristics were understood, proved that it occurred more commonly than had hitherto been thought. The apparent increase in the incidence of a disease may also be due to improvement in the methods of diagnosis. Dr. Robertson states that he has consulted one or two authorities on infectious diseases in this country on the occurrence of thyroiditis in connexion with such disorders and found that they had not suspected that inflammation and congestion of the thyroid was an accompaniment of some of the specific fevers. It is quite possible that further investigation will show that the cause of some of the unpleasant sequelæ and developmental disorders that are associated with zymotic diseases may be found in affections of the thyroid gland. Should this prove to be the case appropriate treatment may possibly prevent the occurrence of such conditions as infantilism and myxœdema.

ELECTRARGOL IN THE TREATMENT OF BRONCHO-PNEUMONIA IN CHILDREN.

WE have received a copy of a paper published in *La Revue Suisse de Médecine* of Oct. 22nd and 29th, 1910, by Dr. H. Perrier of Fribourg, recording some observations on the treatment of broncho-pneumonia in children by means of injections of colloidal silver. This substance occurs in two chief forms—collargol and electrargol. The former substance is obtained by chemical processes, one method being the reduction of a solution of silver nitrate by citrate of iron; the latter is prepared by discharging an electric arc between two silver electrodes in cold water previously sterilised. The suspension of colloidal silver thus obtained can be easily rendered stable and isotonic by some stable colloid such as albumin. The final product is known as electrargol, and contains particles which can be distinctly seen with the ultra-microscope. It can be given without danger either by subcutaneous, intramuscular, or even intravenous injection. After its experimental injection in animals it can be found in various organs such as the liver, spleen, heart, and kidneys, and in the intestinal wall. It is found to possess a greater anti-microbial activity *in vitro* than that of the salts of mercury. Achard and Weil observed in rabbits after injection of considerable doses at first a quite obvious diminution of the white corpuscles, often followed in from 24 to 48 hours by a marked leucocytosis. Employing it in smaller doses in the treatment of disease they noted a constant increase in the number of leucocytes without any preliminary diminution. They also observed a considerable increase in the eosinophiles. Dr. Perrier in his own cases always found distinct leucocytosis, the number sometimes being increased to twice or three times the original after one or two injections of 5 c.c. of electrargol. It seems to produce an almost constant rise of temperature during the first or second hour after injection, and this may be accompanied in adults by a sense of lassitude or malaise, which, however, has not been noticed in children. This rise is often followed by a notable fall of temperature. Dr. Perrier has employed this substance in the treatment of 47 cases of broncho-pneumonia in children, in 30 of which it was secondary to measles, in 3 to whooping-cough, and in 9 to influenza. Of these 11 died, giving a percentage mortality of 23·4. These results appear very favourable in comparison with those usually obtained in the hospitals of Lausanne, where these observations were made under the supervision of Professor Combe. The average mortality from broncho-pneumonia in the decade 1898 to 1907 was 60·8 per cent., the lowest in any one year being 45 per cent. Dr. Perrier's cases comprised those admitted in 1908 and 1909, and were spread over a period of 15 months. The method of administering electrargol was to inject 5 c.c. drawn direct from the sterilised ampoules in which it is supplied by the manufacturers, and to repeat the injection daily so long as the fever persisted. Dr. Perrier also insists on the importance of giving one or two injections at an interval of two or three days after the temperature has become normal. Even young infants of a few months bear the dose of 5 c.c. well. In certain severe cases, or in those in which defervescence is prolonged, a double dose of 10 c.c. may be given, while adults can receive as much as from 30 to 40 c.c. The useful effects of electrargol are said to be due partly to a bactericidal effect upon the exciting cause of the infection and partly to a stimulating effect upon the defensive mechanisms of the body. Dr. Perrier gives protocols of his cases, illustrated by the temperature charts, upon which are marked the injections and the quantity given.

IS EQUINE "PINK-EYE" COMMUNICABLE TO MAN?

A QUESTION asked recently in the House of Commons has brought the above subject somewhat prominently before the public notice, and the matter is deserving of attention on account of the fact that there are apparently still some who assert that the equine disease commonly termed "pink-eye" can be communicated to man. It is somewhat unfortunate for the lay mind that such a name should be popularly used to designate one of the forms of infectious conjunctivitis to which human beings are subject and at the same time used as a stableman's term (and even often by veterinarians) for a disease of the horse which is equally infectious to other animals of this species. That there is, however, no connexion between the two is well recognised by members of both the medical and the veterinary profession; and the fact of horses, in a stable over which there are dwelling-rooms, being affected with so-called "pink-eye" need not give the slightest anxiety to the occupiers of the rooms. No authenticated case has ever been reported in which it could be clearly demonstrated that a human being had caught "pink-eye" or even the so-called "influenza" from a horse, nor yet has the converse ever been proved or any instance been brought to light in which a horse has been infected from man. The reply given by the First Lord of the Admiralty was cautiously but admirably put, and he expressed the situation exactly when he stated: "I would add that pink-eye, being an equine disease, has no known connexion with the conjunctivitis to which the cadets at Osborne have been subject."

BIO-CHEMICAL TESTS FOR BLOOD-STAINS IN INDIA.

THE injection into an animal (*a*) of the blood or blood serum of another animal (*b*) of different species causes its blood to be so modified in constitution that when the blood serum of (*a*) is brought into contact with even a high dilution of the blood of (*b*) a precipitate is formed. Nuttall had shown that although a reaction takes place when *any* anti-mammalian serum is brought into contact with *any* mammalian blood dilution, if sufficient time be allowed, yet that there is no difficulty in distinguishing between specific and non-specific reactions if the limits fixed by Uhlenhuth are observed—viz., the dilution of the blood to be examined must be at least a thousandfold dilution, and the reaction of this dilute blood must be evident within 20 minutes. Following on this it was found that dried blood-stains on being treated with 0·85 per cent. salt solution gave a fluid

which was to all intents and purposes a dilute blood, and reacted in a similar way. The degree of dilution was shown by Nuttall to be most accurately measured by the amount and permanency of the froth produced on shaking. A memoir[1] by Lieutenant-Colonel W. D. Sutherland, I.M.S., gives an account of researches that he has carried out at the Medical College, Calcutta, to ascertain the applicability of the bio-chemical tests to medico-legal work in India. His chief conclusions are summarised as follows: 1. By means of the peroxide of hydrogen and leuco-malachite green tests we may ascertain whether blood is present in the stain under examination; this may be confirmed by the spectroscope. 2. The microscope will show whether the red corpuscles present are those of a mammal. 3. If this be the case, the precipitin test must be applied for further differentiation; the anti-sera required can be obtained by treating fowls and rabbits with the bloods of man and other animals; a more prolonged course of treatment and higher doses are required, as a rule, in tropical than in temperate climates; the anti-sera may be obtained most economically by treating the animals by means of intravenous injections. 4. The anti-human sera will distinguish whether or no the stain under examination has been caused by human blood, which may thus be safely differentiated from that of the anthropoid apes. 5. The age of the stain, up to 27 months, does not affect the test. Further, the anti-sera can only be prepared where there is a large freezing chamber and where there is a lying-in hospital near the laboratory, for human placental blood is required, and in large quantities, and as fresh as possible, for the treatment of the animals, the most important question being that concerning the presence or absence of human blood in the stain, for the determination of which large quantities of anti-human serum are required. Lieutenant-Colonel Sutherland does not consider that the complement-deviation test is likely to be practically available as a matter of routine on account of the difficulty of obtaining anti-sera of the very high potency that is needed. The anaphylaxis test would necessitate a delay of at least 14 days between receipt of the suspected blood-stains and the carrying out of the test. It is hardly requisite to add that all bio-chemical tests of this nature in forensic medical practice must be performed by an expert. The extent to which such a test would become applicable may be realised from the fact that in the single province of Bengal during the year 1909 there were more than a thousand medico-legal cases of this nature submitted to the analysis of the chemical examiner.

SORANUS OF EPHESUS.

IN the *Classical Review* for March is an article by Sir Clifford Allbutt which has for its text an essay by Professor Johannes Ilberg upon the gynæcological and obstetrical writings of Soranus of Ephesus. This physician, who lived early in the second century A.D., is known in modern days by a treatise on fractures and by his obstetrical writings, and these latter have come down to us only in a fragmentary condition. As preserved in a fifteenth century MS. in the Bibliothèque Nationale (Parisinus gr. 2153), they consist of two undoubted books of Soranus and portions of others contained in Bk. XVI. of the Ἰατρικά of Aetius. Fragments are also preserved by Caelius Aurelianus and by Oribasius, while an early Latin translation exists under the title Gynæcia Muscionis. The earliest known MS. of this translation is one of the IXth–Xth century in the Royal Library at Brussels. Muscio compressed Bk. I. of Soranus into a series of questions and answers, but Bk. II. is translated, or we should rather say paraphrased, more at large. That Soranus had a high ideal of the midwife's calling is evident from the qualities which he lays down as those which she should possess, Bk. I., cap. ii. The best midwife, he says, should be thoroughly trained in all parts of the healing art, should be undismayed and clear-headed in time of danger, able to bring helpful counsel and encouragement to those in labour, and should have had a child of her own that she may the better be able to sympathise with the sufferings of her patients. She should not be too young, should be temperate in all things, and should drink nothing but water, for she is never certain when she may be called to those in danger. She must not be a lover of money, lest on account of gain she may be tempted to procure abortion. She must not be superstitious, and she must be very particular about the daintiness (? cleanliness—τρυφερία) of her hands. So far Soranus and his precepts might have been written to-day. The other portions of his treatise show good clinical observation, and Sir Clifford Allbutt confers a benefit upon his medical brethren of to-day in drawing their attention to the writings of an almost forgotten predecessor.

[1] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series, No. 39. The Applicability to Medico-legal Practice in India of the Bio-chemical Tests for the Origin of Blood-stains. Calcutta, 1910. Price 9d.

THE TREATMENT OF INTUSSUSCEPTION BY INJECTION AND TAXIS.

THE modern tendency is to treat intussusception by immediate laparotomy. Writing in Burghard's "System of Operative Surgery," Mr. G. H. Makins says: "An intussusception in any form or variety demands an abdominal section at the earliest moment after its detection. Treatment by inflation or injection is always untrustworthy and generally useless." This we believe to be sound advice, though it may be contended that this rule is too absolute and that the treatment so condemned is worthy of trial in certain cases. From time to time cases of its success are recorded. In the *Canadian Practitioner* for March Mr. F. N. G. Starr, surgeon to the Hospital for Sick Children, Toronto, makes a plea for this treatment. Admitting that immediate operation is indicated in the majority of cases he asks the question, "When one sees a case early and makes a diagnosis promptly, before secondary inflammation has occurred, surely there are some cases which can be relieved without operation?" He has seen three such cases—in a boy aged 6 years, in an infant aged 3 months, and in a child aged 15 months. In each case there was sudden abdominal pain followed by vomiting, a desire to go to stool, straining, passage of bloody mucus, and the abdominal facies. On examination from half an hour to three hours after the onset of symptoms a sausage-shaped mass was felt in the abdomen. In every case the child was suspended by the feet and continuous irrigation with a fall of about 4 feet was used, while taxis was performed on the tumour within the abdomen. The tumour diminished in size and suddenly disappeared. Flatus was immediately passed, followed in one case by corn, in another by peas, and in the third by fæcal matter. The subsequent treatment consisted in the administration of paregoric and abstinence from food for 24 hours. The majority of his cases, however, came to operation, and he thinks that if more than five or six hours have elapsed since the onset of symptoms it is not safe to waste any more time in trying to secure reduction by injection and taxis. In the cases suitable for a trial of injection and taxis success is revealed by the forcible ejection of the water with gas and fæces or some indigestible material. If this does not occur abdominal section should be at once performed. Twenty years ago a strong plea was made by Sir

Jonathan Hutchinson for the treatment of intestinal obstruction by abdominal taxis before resorting to operation. Not long ago Dr. E. P. Baumann reported in our columns a case of intussusception in which he accomplished reduction by abdominal taxis.[1] There was a sausage-shaped tumour lying transversely below the level of the umbilicus. Per rectum the rounded end of the tumour was felt. Dr. Baumann recommended immediate operation, but determined to essay abdominal taxis. He was able to grasp the tumour externally with the left hand, and with the tip of the right forefinger in the rectum exerted a kind of bimanual manipulation, alternately increasing and relaxing the pressure with either hand. The tumour gradually disappeared with gurgling, and the child was instantly relieved.

EXCEPTIONAL FORMS OF ERYSIPELAS IN INFANTS.

IN the *Progrès Médical* of Jan. 28th M. Milhit and M. Stévenin have drawn attention to certain exceptional forms of erysipelas in infants which are liable to be misunderstood by those who are not aware of their existence. In one form erysipelas manifests itself as an œdema of ordinary appearance, which may be localised or generalised. The œdema may be fixed in position or extremely mobile, and may be hard or soft. It does not show the characters of inflammatory œdema; its colour is white or very slightly rosy. The general condition of the infant may be unaffected and there may be no fever, but even in these cases the prognosis is grave, especially if the infant is under the age of a month. A boy, aged 8 months, was taken to hospital on March 31st, 1909, because he was feverish and vomited. The temperature was 103·1° F. His symptoms were attributed to gastro intestinal disturbance and slight bronchitis. Incidentally it was noted that the abdomen seemed enlarged and tender in the hepatic region. On the following day there was hard circumscribed œdema in the hypochondrium which Professor Hutinel did not hesitate to diagnose as an abnormal form of erysipelas. At the periphery of the œdema there was not the characteristic ridge but a rosy line. The local temperature was elevated. Puncture yielded serous fluid which swarmed with streptococci. The general condition of the infant was good, and he recovered in four or five days. Local desquamation followed. In another case, a boy, aged 1 month, was taken to hospital by his mother because his legs had been swollen for two days. There was no fever or serious general symptoms. Having discussed the various possibilities—œdema of the new-born, cardiac and renal œdema, thrombosis of the renal veins, and so on—Professor Hutinel diagnosed erysipelas, basing his opinion on the existence of a little rosy line at the periphery in places, adenopathy, and the presence also on the back of œdema with a rosy peripheral line. The evolution confirmed this diagnosis. On the following day there was moderate pyrexia, the general condition was worse, the œdema had spread from the legs half-way up the abdomen, and from the back to the neck. On the evening of the next day the child died. In another exceptional form erysipelas leads to the development of multiple abscesses, and the primary condition is liable to be overlooked. The following is an example. A well-nourished male child, aged 35 days and breast-fed, was taken to the surgical department of a hospital on April 19th, 1909, for an abscess of the left foot, which was incised and regularly dressed. He was subsequently taken to the medical department because he had wasted for some days and his arms and legs were swollen. There were a second abscess on the right foot, swelling of the feet, legs, and scrotum, and slight œdema of the abdominal wall and forearms, but the temperature was normal. However, in many places a red line was found and also some desquamating patches. Erysipelas was therefore diagnosed. On the 21st there were a ridge across the abdomen 3 cm. above the umbilicus, marked swelling of the scrotum, and œdema of the penis. On the 23rd the œdema of the abdomen had disappeared, that of the left leg had diminished, but the right leg was very œdematous and red, and the left arm and hand were œdematous. On the 26th there was an abscess on the left hand and the œdema had reappeared on the abdomen. On the 27th the abscess on the hand was incised, and the pus was found to contain streptococci and staphylococci. The erysipelas invaded the scalp and eyelids. On the 30th there was an abscess on the left foot. On May 10th an abscess appeared in the right lumbo-sacral region. On the 13th an abscess appeared at the left internal malleolus and another at the right external malleolus. On the 17th an abscess appeared on the scrotum. In the meantime the erysipelas recurred in several of its former sites. On the 24th recovery was complete. It is important to bear in mind that erysipelas in the child, and especially in the infant, rarely shows the characteristic local and general symptoms found in the adult. When œdema such as has been described is present a faint rosy line should be looked for at the periphery or elsewhere on the skin and also desquamating patches. These conditions, even in the absence of fever, are sufficient for the diagnosis of erysipelas, which may be confirmed by the rapid evolution of the disease and by examination of the serous exudation for streptococci.

[1] THE LANCET, March 2nd, 1907, p. 581.

A MEDIÆVAL ATTITUDE IN GREECE.

WE have received a very interesting pamphlet[1] from Dr. S. K. Zavitzianos, which deserves translation from the Greek, wherein it must remain difficult of reading for any large medical public. In April, 1910, Dr. Zavitzianos was fined by the police court in the town of Corfu in Greece for "using insulting language" about the proceedings of the local authorities with regard to the milk-supply of the town. What our excellent colleague said was, "that the method employed for testing the milk is altogether ridiculous," and in the pamphlet before us the subject is enlarged upon and a full description is given of what the author characterises as the thoroughly useless and unscientific tests employed, which are unfair alike to the consumer and to the purveyor of milk. So far from being fined for stating the truth that was in him, it seems to us that Dr. Zavitzianos might well have been presented with a medal by a grateful public, and until some such spirit prevails towards scientific truth Greece will hardly hold her own in the upward competition for a finished civilisation. Unfortunately, the methods denounced by Dr. Zavitzianos appear to obtain in other towns of Greece besides Corfu, and the picture presented to us of official obstruction and stupidity, and the spectacle of narrow-minded resentment aroused by the spirited action of an individual expert are far from inspiring confidence in the intelligence and good faith of the local administrators. The pamphlet deals at some length with the regulations in force in other countries for safeguarding the public health, and reviews writings on the subject in England, France, and America. With regard to the spread of tuberculosis, the disturbing statement is made that, whereas in other civilised communities the number of deaths from this disease shows a steady decrease, in Greece it has doubled since the year 1899 Dr. Zavitzianos makes an eloquent appeal to the Greek public, couched in vigorous and sometimes picturesque

[1] Town Hygiene and Civilisation. By Dr. S. K. Zavitzianos. Corfu. 1910.

language, to protest against backward methods, only calculated to make a laughing-stock of a nation which aspires to the position of a leader of civilisation in the Near East.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE choice of the Council of the Royal College of Physicians of London for the new Fellowships, shortly to be made, will be scrutinised keenly, for there is a feeling in the medical profession that the principles which guide these elections do not work quite justly. We hold no brief for any individual claim, and doubt, indeed, how far the word "claim" can be fairly used. We have refused steadily to say a word on the subject in such directions, feeling that to do so would be regarded, and rightly, as an undue interference with a dignified corporation in the management of its own affairs; but it is idle to pretend that the medical profession at large understands the system under which the dignity of the Fellowship is conferred by the College upon its Members with great rapidity in some circumstances and with great delay in others. Nor is the dissatisfaction confined to provincial Members, as once it mainly was; while a more or less general custom that Fellows of the College should be on the staff of certain teaching hospitals has been departed from, which has consequently widened the sphere of candidature. We quite appreciate the position of the Council, for while the results of these elections are jealously watched, the difficulties of the electors are hidden from the medical profession. The question seems to be whether the principles on which the Fellowships are conferred should be modified so as to obviate the risk of any loss of public confidence, and modified in some ways whose reason would appear readily.

Dr. E. G. Graham Little has been appointed representative of the University of London at the celebration of the centenary of the Royal University of Breslau in August.

AT a recent meeting of the Senate of London the title of Emeritus Professor of Clinical Medicine was conferred upon Sir Thomas Barlow, K.C.V.O., F.R.S.

THE COMPULSORY NOTIFICATION OF PULMONARY TUBERCULOSIS IN HOSPITALS.

THE Local Government Board, as we announced briefly last week, has issued an Order under which the notification of pulmonary phthisis occurring in hospitals and dispensaries becomes compulsory. The following are the regulations contained in the Order and the Schedule of Notification:—

DEFINITIONS.

Article I.—In these Regulations, unless the contrary intention appears:—(*a*) Words importing the masculine gender include females (*b*) words in the singular include the plural, and words in the plural include the singular; (*c*) expressions referring to writing include references to printing and to other modes of representing or reproducing words in a visible form, and references to printing include references to other mechanical modes of so representing or reproducing words; (*d*) the expression "hospital" means any hospital, dispensary, or similar institution for the treatment of the sick, which is partially or wholly supported otherwise than by the contributions of the persons treated thereat or of their relatives or guardians and otherwise than from rates and taxes; (*e*) the expression "medical officer" means any medical practitioner who is in medical attendance on a patient at a hospital; (*f*) the expression "council" means, as the case may be, the mayor, aldermen, and commons of the City of London in Common Council assembled, the council of a metropolitan borough, the council of a municipal or other urban district, or the council of a rural district; and (*g*) the expression "area" means the area subject to the jurisdiction of the council for the purposes of the Public Health (London) Act, 1891, or of the Public Health Act, 1875, as the case may be.

COMMENCEMENT OF REGULATIONS.

Article II.—These Regulations shall come into operation on the First day of May, One thousand nine hundred and eleven, and, subject to the provisions of Article VIII., shall then and thereafter apply and have effect throughout England and Wales, and shall be enforced and executed by every council and their officers.

SUPPLY OF FORMS OF NOTIFICATION.

Article III.—For the purposes of these Regulations—(i) Every council shall provide and maintain a sufficient supply of printed copies of the form set forth in the Schedule to these Regulations. (ii) Every council shall as soon as practicable after these Regulations come into operation, and afterwards from time to time when application is made to them, supply printed copies of the form set forth in the Schedule to these Regulations to the trustees, committee of management, or other governing body of every hospital within the area of the council for use by the medical officers of the hospital.

NOTIFICATIONS BY MEDICAL OFFICERS.

Article IV.—(1) A medical officer of any hospital, within the period of forty-eight hours after his first recognition of pulmonary tuberculosis in a person upon whom he is in medical attendance at the hospital, shall complete, sign, and transmit a notification of the case in the form shown in the Schedule to this Order to the medical officer of health for the area within which the hospital is situate.

(2) A medical officer of health who receives a notification relating to a patient whose residence as described in the notification is not within the area for which he is medical officer of health, shall forthwith transmit the notification to the medical officer of health for the area in which the patient's residence is situate, and shall at the same time inform the medical officer of the hospital that he has done so, and shall give to him the name and address of the medical officer of health to whom the notification has been sent. Any expenses incurred by a medical officer of health in carrying out the duties imposed upon him by this subdivision shall be defrayed by the council of the area for which he is medical officer of health.

(3) The medical officer of health for every area within the administrative county of London shall after the end of each week send to the medical officer of health for the administrative county of London a statement of every notification received by him during the week in pursuance of these regulations and relating to a patient whose residence as described in the notification is situate within the area for which he is medical officer of health, and of every notification received by him during the week in pursuance of the Public Health (Tuberculosis) Regulations, 1908. Such statement shall contain the name of the hospital, if any, the home address, age, and sex of the patient and the date of the notification.

Article V.—A notification to be transmitted to a medical officer of health in pursuance of these Regulations may be transmitted by being delivered to that officer or by being delivered at his office or residence, or may be sent by prepaid letter post addressed to him at his office or at his residence.

REMUNERATION OF MEDICAL OFFICERS.

Article VI.—The council shall pay to the medical officer of the hospital the sum of one shilling in respect of each notification sent by him in pursuance of these Regulations and relating to a person whose residence as described in the notification is situate within the area of the council, and the said sum shall in every case be deemed to cover all expenses, including the cost of transmission.

EXCEPTION AND APPLICATION OF ENACTMENTS AND SPECIAL POWERS OF COUNCILS.

Article VII.—(1) Nothing in these Regulations shall have effect so as to apply, or so as to authorise or require a medical officer of health or a council, or any other person or authority, directly or indirectly, to put in force with respect to any patient in relation to whom a notification in pursuance of these Regulations has been transmitted to a medical officer of health, any enactment which renders the patient, or a person in charge of the patient, or any other person, liable to a penalty, or subjects the patient to any restriction, prohibition, or disability affecting himself, or his employment, occupation, or means of livelihood, on the ground of his suffering from pulmonary tuberculosis.

(2) Subject as aforesaid, a council on the advice of their medical officer of health, in the case of a patient in relation to whom a notification in pursuance of these regulations has been transmitted to the medical officer of health, may—(i) Take the necessary measures to secure the disinfection of infected articles and the cleansing or disinfecting of premises which have been used by the patient; (ii) take the necessary measures for the safe disposal or destruction of infectious discharges of the patient; (iii) supply all such reasonable assistance, facilities, and articles as will tend to diminish the risk of infection arising from the conditions affecting the use or occupation of any room when used or occupied by the patient as a sleeping apartment; (iv) furnish for the use of the patient, on loan, or otherwise, any appliance, apparatus, or utensil which may be of assistance in preventing the spread of infection; and (v) appoint such officers, do such acts, and make such arrangements as may be requisite for giving advice and for carrying out the provisions of these Regulations, and of the Public Health (Tuberculosis) Regulations, 1908: Provided that nothing in this subdivision shall be deemed to authorise a council to take any of the measures herein mentioned at any hospital.

(3) A council, on the advice of their medical officer of health, may provide and publish or distribute in the form of placards, handbills, or leaflets, suitable summaries of information and instruction respecting Pulmonary Tuberculosis, and the precautions to be taken against the spread of infection from that disease.

MODIFICATIONS CONSEQUENT UPON LOCAL ACTS.

Article VIII.—Nothing in these Regulations shall have effect in derogation of any power conferred, or of any obligation imposed with respect to pulmonary tuberculosis by a local Act.

Subject as aforesaid and subject to the condition set forth in subdivision (1) of Article VII., these Regulations shall apply and have effect in relation to every area in which a local Act containing provisions with respect to pulmonary tuberculosis is in force,

Provided that, on the application of the council for the area, we may,

by Order, direct that, after the date fixed by the Order, these regulations shall apply to the area with such exceptions or modifications as are specified in the Order.

SHORT TITLE.

Article IX.—These Regulations may be cited as "the Public Health (Tuberculosis in Hospitals) Regulations, 1911."

SCHEDULE.

FORM OF NOTIFICATION.

PUBLIC HEALTH (TUBERCULOSIS IN HOSPITALS) REGULATIONS, 1911.

To the Medical Officer of Health for the .....
of .. ;
I hereby give you Notice that, in my opinion,
.....
who is now an { in-patient / out-patient } at the ..... Hospital and in relation to whom particulars are appended, is suffering from Pulmonary Tuberculosis.

Residence* prior to attendance at or admission to the above-named Hospital .....

Age .....
Sex .....
Dated this ..... day of ....., 19 ... .

(Signed) .....
Medical Officer in attendance on the above-named Patient.

* Care should be taken to ascertain accurately the patient's place of residence. The name of the town or village and of the county in which it is situated should be stated as well as the name or number of the house and the name of the street.

Given under the Seal of Office of the Local Government Board, this Twenty-second day of March, in the year One thousand nine hundred and eleven.

(L.S.) JOHN BURNS, President.
H. C. MONRO, Secretary.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

A MEETING of the Organising Committee was held on March 29th in the library of the Royal College of Physicians of London. Sir THOMAS BARLOW was in the chair and 48 members were present.

The minutes of the previous meeting were confirmed.

Letters of regret for absence were read from:—Dr. Byrom Bramwell, Sir John Byers, Professor D. W. Finlay, Dr. G. A. Gibson, Mr. J. W. B. Hodsdon, Dr. W. A. Jamieson, Dr. James Little, Dr. R. W. Philip, Sir George Hare Philipson, Mrs. Scharlieb, Professor T. Sinclair, Dr. Pringle, Dr. F. Taylor, Professor Sims Woodhead, and Professor Arthur Thomson.

The following report was brought up from the Executive Committee:—That the treasurers be authorised to open a general account with the London County and Westminster Bank. That the treasurers be authorised to open a petty cash account to meet current secretarial expenses, the sum deposited not to exceed £100. (With a view to start such a current account it was resolved to apply for part subscriptions to members of the committees already appointed—Executive, Finance, and Reception.) The chairman of the Finance Committee on being asked said that it was impossible to make any definite estimate of receipts and expenses, but that a large sum—probably not less than £7000 or £8000—would have to be raised. That it is desirable that an exhibition of medical and surgical appliances be held. That the Permanent Commission be asked to consider the question of the number of Government delegates to be invited from each country, and that it be suggested that each Government should be asked to select one delegate to represent it officially. That invitations be issued only to Governments and accredited universities. To recommend that the opening session of the Congress should take place on Wednesday, August 6th, and the closing session on the afternoon of Tuesday, August 12th, 1913. In reference to this it was explained that the inconvenience of Bank Holiday (August 4th) on the one hand and the impossibility of meeting earlier than August owing to the curriculum of foreign universities on the other hand were so great that it was found better to include a Sunday in the week of the Congress than to try to complete the whole in the week August 4th to August 9th, which had been originally intended.

These resolutions were adopted.

The Executive Committee reported further: That the surplus left over from the Congress at Budapest had been devoted to a "Prize of Hungary" to be awarded under special regulations at each future meeting of the International Congress. That the University of London, the Imperial College of Science and Technology, and the City and Guilds (Engineering) College had expressed their willingness to put the rooms in their buildings at the disposal of the Congress and that negotiations were proceeding with the other bodies.

The following report of the Executive Committee was brought up: To recommend that the Sections of Laryngology and of Otology be continued as two independent sections. (*a*) That the Executive Committee be requested to allocate to them two adjoining rooms; (*b*) that it be a recommendation to the councils of these two sections to arrange their programmes in a conjoint council meeting; and (*c*) that the transactions of these two sections should be published in one volume and supplied to each member of either section. To recommend that a Section of Radiology be included in the Congress. To recommend that the Section of Pathology include a Subsection of Chemical Pathology. To recommend that a Section of Anæsthesia, both General and Local, should be established. To recommend that Sections XX. and XXI. of the last congress be altered so that one section should be devoted to naval and military medicine and another section wholly devoted to tropical medicine. To recommend that the titles of the following sections be altered, and that instead of Section III., General and Experimental Pathology; Section IV., Bacteriology and Pathological Anatomy; Section XVIII., Hygiene and Immunity, the sections be entitled: Section III., General Pathology and Pathological Anatomy; Section IV., Bacteriology and Immunity; Section XVIII., Hygiene and Preventive Medicine.

These resolutions were adopted.

The Executive Committee further reported as follows:—That it is desirable that when at any of the sections subjects are appointed for discussion the papers (*rapports*) introducing such subjects should be previously printed and distributed (*a*) to all the members of the section who have intimated their intention to join in the discussion; (*b*) to any members who may apply for them; and that a stock of such papers be kept at the Central Office, to be handed to other members of the section at the time of the meeting. It was further stated, in answer to questions, that though the introductory papers could not each be printed in full in the four official languages, abstracts of them would be printed in all four languages, as was done at the last Congress in London. That it is desirable that in each section the morning sessions shall be devoted to discussions on subjects of interest to be selected by the officers of the section. That each such discussion shall be introduced by not more than two speakers, to be selected by the officers of the section, with due regard to the international character of the meeting. That it shall not be allowed to read the introductory papers already printed, but a time of not more than 20 minutes shall be allowed to each introducer to read and elaborate an epitome of his introductory paper. Subsequent speeches in the discussion shall not exceed ten minutes each. That none but the introductory speakers shall be specially invited by the officers of the section to take part in the general discussion, and that no written papers be allowed to be read in the course of the discussion. That at the morning sessions no papers or communications on subjects other than the subject for discussion shall be taken unless the general discussion has terminated before the hour fixed for the termination of the morning session. That the afternoon session shall be devoted to papers offered by members of the section. That the staff of the section shall have the power of selection from among the papers thus offered, and of rejection of any which they do not think advisable for the work of the section. That not more than fifteen minutes be allowed for the reading of any such paper, nor more than five minutes for any speech in the discussion thereof. That the staff of the section shall have power to arrange the order in which papers thus offered shall be taken, and shall be guided by the intrinsic importance of the papers, and not by the priority of their reception. That there should be no honorary presidents of sections. That in the event of a president of a section being prevented from attending one or other of the meetings of his section, one of the vice-presidents or members of council shall take the chair in his absence.

The above resolutions were adopted.

It was stated that the whole of the above resolutions would

be submitted to the Permanent Commission of the International Congresses of Medicine, the first meeting of which will be held in London on April 21st and 22nd.

The Executive Committee further reported the following resolutions:—That Dr. Clive Riviere be appointed secretary to the Reception Committee. That it be an established principle that, if sectional dinners be held, each member dining at such dinner shall pay his own expenses. That a ladies' committee be appointed. That the following subcommittees be appointed, with power to add to their number and to elect their own chairmen:—

Dinner and Soirée Committee.—Sir William Bennett, Sir Havelock Charles, Sir Anderson Critchett, Sir Thomas Crosby, Dr. George Ogilvie, and Mr. D'Arcy Power.

"*London Sights*" *Committee.*—Dr. T. D. Acland, Dr. Bertrand Dawson, Mr. W. H. H. Jessop, Dr. Norman Moore, Mr. Stephen Paget, Dr. Parkes Weber, and Dr. Leonard Williams.

Excursions Committee.—Mr. L. A. Bidwell, Dr. Gordon Dill, Sir Francis Laking, Professor William Osler, and Mr. Mayo Robson.

That the following be appointed to deal with an exhibition or exhibitions of pictures, antiquities and other objects of interest in the History of Medicine: Dr. Norman Moore (chairman), Sir William Allchin, Dr. Leonard Mark, Mr. D'Arcy Power, and Dr. Parkes Weber.

These resolutions were adopted.

The Executive Committee further reported: That, for the purpose of communication with foreign societies or with foreign medical men, the Central Office of the Congress shall be at the disposal of secretaries of sections and that translators shall be provided by the Central Office when required by the secretaries of sections. That all official correspondence connected with the sections shall pass through the Central Office.

These resolutions were adopted.

The committee then adjourned.

THE LONDON COUNTY COUNCIL AND MEDICAL AFFAIRS.

The Board of Education and the London County Council's Scheme of Medical Inspection and Treatment.

SOME of the first agreements made by the London County Council with metropolitan hospitals for one year for the medical treatment of elementary school children expired during January, and at the end of last year, as reported in THE LANCET, Jan. 21st, p. 184, the Council decided to ask the Board of Education to sanction the renewal of the agreements for 12 months longer, on the ground that it was too early to decide the merits of the present scheme of treatment. The Board of Education, in reply, addressed a long letter to the Council in which it severely commented on the arrangements for medical treatment in London and declined to sanction the extension of the agreements for more than six months. The details of the letter were withheld from publication in order that the reply of the Children's Care Subcommittee might be issued concurrently, and the two documents were submitted to the Education Committee of the Council on March 22nd.

The Board's letter covered three closely printed foolscap pages, and the following were the salient points: The Board expressed surprise and regret that a report on the general working of the scheme, asked for as one of the conditions of the central authority's approval, had not been furnished. In the absence of such a report the Council could not have before it the data from which to justify its request for an extension of the scheme. Only through the investigations of its own medical department was the Board in possession of information as to the main defects of the scheme and their more obvious causes, and was able to indicate the modifications that would remedy, or at least mitigate, the graver evils that had been shown to exist in practice. The letter mentioned various points as to which information was incomplete and went on: It was very disappointing to the Board, and obviously a grave defect in the local authority's fulfilment of its responsibilities, that no report has been furnished either to the Board, the Council, or the public, setting out in detail the work actually accomplished at each hospital, nor any statement of measures adopted or proposed to be adopted to remedy the most conspicuous defects in the working of the scheme. In spite of the detailed criticism of Dr. G. Newman in his recent annual report,[1] up to the end of November, at all events, no effective remedy for either the incidental or inherent defects had yet been applied. The Board could only repeat what Dr. Newman had said, that unless the Council's administration was to be gravely discredited it was essential that the machinery for the selection and following up of children coming within the scope of the scheme should be reformed without any delay.

The "Graver Defects" of the Scheme.

The Board of Education proceeded to summarise "the graver defects" of the Council's scheme. The first had relation to the "almost entire divorce" of the administration of medical treatment and inspection respectively. After the school medical officer had notified the child for treatment he lost touch with the case entirely unless and until he happened to re-inspect the same school, and in the meantime no other medical officer of the Council had anything to do with the case either before, during, or after hospital treatment, and no medical officer of the Council visited the hospitals or communicated with them with reference to the carrying out of the treatment or the recording of the results. The Board suggested that the school medical service and the educational administrative staff must no longer be separated into watertight compartments. If anything like the present system was to be given further trial the organisation on the "treatment" side should be strengthened by some form of medical assistance. This had some bearing on another point—the fact that the Council has stipulated that "no grant given shall entitle the Council to representation on the governing body of the hospital nor to interference with the work of the departments concerned." If this provision had been understood to preclude the officers of the Council from conferring with the hospital authorities as to arrangements for receiving and treating children, recording their attendance and the results of treatment, the Board declared that it would not have sanctioned the scheme. The Board regarded the clause as providing that officers of the Council should not be entitled to criticise from a medical and surgical point of view the treatment given by the hospital or the internal arrangements of the institutions, these being matters for which the authorities of the hospital must remain solely responsible, and over which no outside body could properly exercise any control. The Board understood, however, that in practice no officer of the Council, administrative or medical, visited the hospitals systematically to obtain first-hand information of the actual working of the hospital scheme of treatment. It was obvious that the gap existing between inspection and treatment became still more prejudicial to economy and efficiency if the period of treatment itself was entirely withdrawn from the observation of the Council. Enlarging on this the Board declared that it was impossible to devise a scheme of treatment through the hospitals that was not extravagant and ineffective unless the Council's officers were in close and continual touch with the work of the hospitals.

The Council, in asking that six hospital agreements might be extended, proposed to increase considerably the number of children sent to some of them, and on this the Board expressed considerable doubt whether the Council was wise in making any addition to the burden of work until it was clear that the machinery, which had proved quite unequal to the strain placed upon it by the present number of cases, was able to cope with an increase, and also until it had been determined from how large an area the children attending a particular hospital should be drawn. At present children came from far too wide an area, and the child population of several of the densest areas were out of reach of any existing hospital and could only be provided for by the creation of some other means, such as school clinics or other treatment centres. When sanctioning hospital treatment on an experimental basis the Board never desired that the experiment should be initiated on a large or ambitious basis, or made to apply (in its then shape) to the metropolitan area as a whole. The difficulties which had arisen were due to the experiment being made on too large a scale, and the Board had very grave doubts whether a proposal to increase the bulk of the work was not premature.

[1] THE LANCET, Dec. 3rd, 1910, p. 1629.

Conditional Sanction to Extension Given.

The extremely late date at which the Council had applied for sanction to renewal had occasioned considerable and needless difficulty, of which the Board had much ground for complaint. No time remained in which to discuss the merits of the scheme; the Board was placed in the position that if it did not agree to the request the great mass of ailing school children in London would be left without any opportunities for obtaining medical treatment, and it might be considered, perhaps, that the present scheme, with all its imperfections, was better than none at all. The Board, therefore, as stated above, gave its approval to an extension of the scheme for six months, and urged the Council to proceed with the utmost expedition to work out adequate remedies for the very defective arrangements now shown to prevail in regard to medical treatment.

On the receipt of this letter the Council decided to make another appeal to the Board on the ground that six months would not suffice (having regard to the Easter and Whitsun recesses) thoroughly to reorganise the present arrangements, and asked that all agreements might be extended so as to expire at one time—viz., Dec. 31st next.

To this the Board, under date March 14th, replied that it was constrained to admit that a considerable time would, in fact, be needed to carry out all the reforms required. The points of the previous letter were emphasised, and the Board expressed regret that pending the settlement of large questions of principle no practical improvement—e.g., the presence of school nurses or other representatives of the education authority at the hospitals during treatment—seemed to be under consideration. There was nothing to show that all the various defects found to exist in 1910 would not continue unremedied during the whole of 1911. On condition that a new scheme was in at least partial operation by October the Board would be prepared to sanction the renewal of the agreements up to Dec. 31st.

The Reply of the Subcommittee.

On the principal question of the reorganisation of the administration of medical treatment the Education Committee has taken action and has suggested that Dr. Kerr should be placed in the department of the education officer, Mr. Blair, and be responsible to him.[2] The reply of the Children's Care Subcommittee therefore to the Board's letter under that head was brief. The only other proposals were that organising officers should attend at hospitals (if the concurrence of the authorities could be obtained) and assist in passing the children through the hospital organisation, see that leakage was prevented, and that steps were taken in respect of obtaining spectacles and home treatment. It was also proposed that the Council should pay for further clinical assistance at those hospitals to which it was intended to send a larger number of children than hitherto. The only result, therefore, of the two months' consideration of the Board's letter is the adumbration of a reorganisation scheme which may be, and probably will be, thrown over by the General Purposes Committee of the Council, and the two minor proposals just mentioned, one of which depends on the consent of the hospitals, the other being a mere matter of financial adjustment.

The Committtee approved of these recommendations and passed the following definite resolution:—

> That the Board of Education be assured that the Council is taking, and will take, all practical steps which can be taken to improve the existing arrangements for medical inspection and treatment of school children, and will ensure that at an early date substantial progress will have been made in the establishment of a complete scheme which will be brought into at least partial operation not later than October, 1911.

The whole question went forward to the Council for final settlement on April 4th when the Finance Committee in a report expressed the opinion that the Council should not commit itself to the definite assurance proposed by the Education Committee as above. The Finance Committee said it had no information as to the exact scope of a scheme which would be acceptable to the Board of Education, or the meaning attached to the term "a complete scheme." Neither had any information been submitted by the Education Committee as to the nature of the proposals intended to be made to give effect to the assurance to the Board, or the probable cost. The Council by agreeing to the recommendation of the Education Committee would part with all control of its future action in regard to medical treatment and would commit itself to an early expenditure at present unascertainable in amount and not improbably to future large expenditure. The emphasis laid by the Board of Education upon the importance of the Council establishing a "systematic scheme of medical treatment connected effectively with a complete scheme of medical inspection under one organisation, instead of being separated as hitherto," gave rise to grave apprehensions on the part of the Finance Committee as to the intentions of the Board and the policy into which the Council might be driven. In the opinion of the Finance Committee it was undesirable on financial grounds that the optional service of medical treatment should be regarded as in the same category as the obligatory service of medical inspection, although no doubt on administrative grounds they should be coördinated. Further, no indication was given by the Board of Education or the Education Committee as to the scope of medical treatment which was contemplated. The Council had confined its operations hitherto to treatment of diseases of the eye, ear, nose, throat, and teeth, and of ringworm, but there was nothing to show that if the proposed assurances, which were in very general terms, were given to the Board, the scope of treatment would not have to be enlarged considerably. The Finance Committee thought the Council should not take any action which might commit it to extension of its present scheme of treatment without full information as to the ultimate expenditure involved, and that the recommendations of the Education Committee should not be agreed to. Any assurances given to the Board must be subject to financial considerations. Medical treatment was emphatically a national service, and the Council should not embark upon an expansion to an altogether indefinite extent in the absence of substantial grants in aid from national funds. Nor should the Council in any way commit itself to the establishment of a complete scheme of treatment, such as the Board of Education apparently contemplated, without having before it information as to at least the general lines of such a scheme and an approximate estimate of the cost. The Finance Committee suggested that the Council should confine itself to giving assurances that subject to financial considerations, the Council was taking, and would continue to take, all practical steps to improve the existing arrangements for medical inspection and treatment, and would communicate to the Board any important steps taken in this direction during the next six months. At the meeting of the Council on April 4th discussion on these matters was adjourned by general consent.

The Proposed Mental Hospital.

The Asylums Committee reported to the Council on March 21st with reference to a site for the proposed mental hospital, towards the cost of which Dr. Henry Maudsley has promised a gift of £30,000. The Council accepted Dr. Maudsley's offer on March 31st, 1908, and approved the necessary capital estimate on June 29th, 1909. The committee explained the delay which has occurred since by stating that almost immediately after the expenditure was authorised the vendors of a site which was before the committee withdrew their offer to sell. Since that time careful consideration had been given to a number of other possible sites, and the committee was able now to submit one which seemed thoroughly suitable. The property was situate at Denmark Hill, and consisted of two residential houses, Nos. 107 and 109, Denmark Hill, Camberwell, S.E. The site was about 600 ft. long by 300 ft. wide, covering an area of 4½ acres, and was near Denmark Hill railway station, Ruskin Park, and the site of the new King's College Hospital. The price asked for the freehold land and buildings was £10,000, and the site had been informally approved by the Commissioners in Lunacy. It was estimated that the cost of building and equipping a hospital for 100 patients would be £40,000, which with £10,000 for the site pointed to a total capital expenditure of approximately £50,000. Sufficient provision had been made in the capital votes to meet the purchase money, and the committee understood that Dr. Maudsley was only waiting for the Council's consent to the purchase to hand over the amount of his promised donation. In accordance with standing orders the consideration of the report, as one involving an expenditure of over £5000, was adjourned for a week, and on Tuesday, April 4th, was approved.

[2] THE LANCET, March 4th, p. 627, and March 18th, p. 760.

Recurrent Insanity.

The Asylums Committee also submitted, for the information of the Council, particulars of the case of a male patient, aged 37 years, who was admitted to Banstead Asylum on Feb. 13th, 1911, for the eighth time. The man had been under detention for a few months at a time in 1890–91, 1898, 1899–1900, 1901–02, 1903–04, 1906, and 1909–10. Information supplied by the guardians showed that the patient apparently had his first attack of insanity at the age of 15, and altogether had been admitted to asylums on no fewer than 13 occasions. He married in 1903 and there were five children by the marriage, two males and three females (ages ranging from 13 months to 6 years and 10 months). All the children were now chargeable to the guardians of a London parish, and the whole family had been in receipt of relief intermittently since 1906. These facts, remarked the committee, plainly indicated the great difficulty of dealing with cases of recurrent insanity to which reference had been made more than once in annual reports of the Asylums Committee. As the law stood at present such cases must be discharged as soon as they were apparently recovered, but it was often quite evident that with the removal of the fostering restraints of an asylum and the resubjection of the patient to the stress and hardships of normal existence he would speedily break down. Moreover, as in the present instance, opportunity was afforded by the intervals of liberty for the propagation of children who must share in the mental and nervous instability of the parent, and who in their turn would probably swell the number of persons for whom asylum accommodation and care had to be provided.

KING EDWARD'S HOSPITAL FUND.

ANNUAL MEETING.

THE annual meeting of the Governors and General Council of King Edward's Hospital Fund for London, to receive the accounts and the report of the General Council for the year 1910, was held, as we announced last week, at St. James's Palace on Tuesday, March 28th, the Duke of TECK being in the chair.

Lord ROTHSCHILD (the honorary treasurer) presented the account of receipts and expenditure and the balance-sheet for the year ended Dec. 31st, 1910, and said that they had distributed last year £155,000. The income derived from non-trust funds was £17,000 in excess of what it would have been if the money had been invested in trust funds. In dealing with these large sums the total expenditure was only £3000, or 1½ per cent. upon the revenue.

The Duke of TECK moved the adoption of the accounts, which was seconded by the LORD MAYOR, and carried unanimously.

Report of the General Council.

Sir SAVILE CROSSLEY presented the draft report of the Council for the year 1910, which was as follows:—

REPORT OF THE GENERAL COUNCIL FOR THE YEAR ENDING DEC. 31ST, 1910.

For the second time since the foundation of King Edward's Hospital Fund the General Council have to mourn the loss of a beloved Sovereign and patron. The following resolution passed by the Executive Committee on May 12th, 1910, expresses the profound sorrow of all connected with the Fund at the death of His late Majesty King Edward VII., its illustrious Founder:—

> "The Executive Committee of King Edward's Hospital Fund for London on behalf of the General Council desire to record their profound sorrow at the great loss which all those associated with the Fund have sustained by the death of their beloved Sovereign King Edward VII. It was on his initiative that the Commemoration of the 60th year of the reign of Queen Victoria took the form of a scheme for the assistance of the hospitals of London, and the Fund which he thus founded and which bears his name is therefore a lasting monument to his constant sympathy with the poor and suffering. To his active personal share in its administration during the years in which he was President, the Fund owed its rapid establishment in public confidence, and he gave repeated assurances of the interest with which he watched its continued progress under his illustrious successor. The Committee respectfully desire to tender their deepest sympathy to His Majesty King George V. and His Gracious Consort in the sad bereavement sustained by their Majesties, and to offer the humble assurance of their loyalty and devotion."

As a result of the death of His late Majesty the Fund has also been deprived of the incalculable advantage of the personal supervision and direction of its affairs exercised for nine years by His present Majesty when Prince of Wales and President of the Fund. The Council are glad to report that His Majesty has graciously been pleased to become Patron of the Fund, and to express his unabated interest in all that concerns its welfare. In June last His Majesty intimated his intention to increase his annual subscription to the Fund from £500 to £1000. Her Majesty the Queen and His Royal Highness the Prince of Wales have also been graciously pleased to increase their subscriptions.

During the interval which under present circumstances must elapse before another Royal President can be appointed, the duties of that office are, in accordance with the provisions of the King Edward's Hospital Fund for London Act, exercised by three governors appointed by His Majesty on the recommendation of the Lord Chancellor, the Prime Minister, and the Governor of the Bank of England. Pursuant to this provision, His Majesty has appointed as governors His Serene Highness the Duke of Teck, Viscount Iveagh, and the Speaker of the House of Commons.

The total receipts for the year 1910 were £205,169 16*s.* 2*d.* This sum was made up as follows:—Donations, £17,767 12*s* 2*d.*; contributions to capital, £32,596 12*s.* 3*d.*, including a legacy of £32,153 19*s.*, together with £147 10*s.* net profit on realisation of securities; annual subscriptions, £26,728 16*s.* 9*d.*; contribution of the League of Mercy, £18,000; from the Lewis estate, £10,000; legacies (other than legacies to capital), £22,941 9*s.* 8*d.*; interest from investments, £76,935 5*s.* 4*d.*; together with £200 from the trustees of the Bawden Fund. The amount distributed was £155,000, being an increase of £5000 over the sum distributed in 1909.[1] Of this the hospitals received £150,000, while the remaining £5000 was distributed amongst consumption sanatoria and convalescent homes taking London patients. The total sum distributed amongst hospitals, convalescent homes, and consumption sanatoria since the foundation of the Fund (after deducting grants to the extent of £5659 16*s.* 7*d.* that have been allowed to lapse) is £1,288,916 8*s.* 5*d.* Since the inauguration of the Fund the amount spent on administration has been £1 4*s.* 11*d.* per cent. of the total amount received.

Amongst the legacies received during the year were payments of £32,153 19*s.* on account of the residue of the estate of the late Mrs. Hames, placed to capital in accordance with the wishes of the testator, £10,000 from the late Miss Elizabeth Chambers, £4919 10*s.* 6*d.* from the late Mr. Richard Clarke, a further £3300 on account of the legacy of the late Miss E. S. Wolfe, and £2000 from the late Miss Ellen Morrison. The Council desires to acknowledge specially the receipt of an annual subscription of £5000 from Mr. Walter Morrison and an anonymous donation of £10,000. The amounts received in donations and subscriptions, excluding gifts to capital, show, as compared with 1909, an increase of £7735 19*s.* 5*d.* The League of Mercy has this year contributed £18,000. During the 11 years of its existence the League has furnished in all £153,000 to the Fund. The Council desire to record their grateful appreciation of the labour of the voluntary workers who have contributed towards the collection of this large sum.

Every eligible hospital and consumption sanatorium which applied for a grant was inspected and reported upon by the Fund's visitors, consisting as heretofore of one medical and one layman in each case. The proposal by the Convalescent Homes Committee to secure beds at consumption sanatoria which could be placed at the disposal of hospitals in London for the accommodation of suitable cases urgently requiring country treatment has now taken practical shape. Grants have been made on this basis by means of which 18 beds have been secured at three sanatoria. It is hoped that the scheme may be extended in future, and the Council have authorised the Convalescent Homes Committee, if necessary, to consider applications for grants on suitable terms towards the capital cost of providing beds for the purpose, where this can only be done by means of additions to the existing accommodation.

In January, 1910, the question of the possible advantages of coöperative purchase by hospitals again came under the consideration of the Executive Committee, largely as the result of the establishment of a scheme of this kind in New York. A subcommittee, consisting of Mr. John G. Griffiths, F.C.A., chairman, the Hon. Sydney Holland, and the Hon. Arthur Stanley, was appointed to consider the question. The report of this subcommittee, which suggests the possibility of coöperation by groups of hospitals in different parts of London, has been circulated to the hospitals with an offer of assistance from the Fund, if desired, in connexion with any experiments in this direction. The same subcommittee also considered the question of forms of tender, and appended to their report a number of specimen forms.

The annual statistical report prepared by the Fund, which began with 16 hospitals only, has been again enlarged. The report published in 1910 dealt with the expenditure of 99 hospital, while similar particulars in respect of another group of eight institutions were circulated privately. With the addition of this group to the published report, the series will deal with nearly every hospital in London which adopts the revised uniform system of accounts, and the assistance which the issue of comparative figures renders towards the achievement of economy will be proportionately increased.

The appointment of the Special Committee to inquire into the method prevailing in the London voluntary hospitals with regard to the admission of out-patients (foreshadowed by His present Majesty when Prince of Wales and President of the Fund) was definitely announced by the governors at the meeting of the Council in December. The Council consider that the Fund is fortunate in having obtained the assistance of three such eminent Commissioners as Lord Mersey, the Chairman of the Committee, Lord Northcote, and the Bishop of Stepney, in its efforts to secure a solution of the questions at issue.

The Distribution Committee have continued to make a careful examination of all schemes for the extension or reconstruction of hospitals, submitted in accordance with the request of the Council. The Fund thus uses its best endeavours to ensure that when capital expenditure of this kind is undertaken, due attention is paid to economy, efficiency, the prospect of funds for future maintenance, and the relation of each scheme to the general question of hospital accommodation in London.

The Council desire to place on record their sense of the loss the Fund has sustained by the death of Mr. Hugh C. Smith, who had served the Fund for many years in the various capacities of trustee, member of Council, chairman of executive committee, and latterly, member of Finance Committee. The Council also deeply regret the loss of one of their first members by the death of Sir John Aird. The President of the Local Government Board, in pursuance of his powers

[1] THE LANCET, Jan. 28th, 1911, p. 256.

under the Act, has appointed Messrs. Deloitte, Plender, Griffiths, and Co. to audit the accounts of the Fund for the year. The Council are obliged to the Press for the services they have rendered in the past, and continue to rely upon their kindly coöperation in obtaining for the Fund wider publicity and support.

The Duke of TECK, in moving the adoption of the report, said that he should follow the custom of His present Majesty, when Prince of Wales and President of the Fund, and review the events of the year, not at this annual meeting, but at the distribution meeting in the previous December. "I will now only make a brief allusion to one subject," he said, "the Special Committee on the Out-patient Question. That committee, under the able chairmanship of Lord Mersey, has been sitting regularly since January, and has made considerable progress with the receipt of evidence. I am sure we are much indebted, not only to the three Commissioners who are devoting so much time and trouble to this important work, but also to the numerous witnesses, both hospital representatives and others interested in the question, who are giving the committee the benefit of their special knowledge and experience. I now beg to move the adoption of the report."

The Earl of BESSBOROUGH seconded the motion, which was carried unanimously.

Sir WILLIAM CHURCH moved the adoption of the following report of the Distribution Committee upon the question of the suspended grant to St. George's Hospital:—

REPORT OF THE DISTRIBUTION COMMITTEE TO THE GOVERNORS AND GENERAL COUNCIL UPON THE QUESTION OF THE SUSPENDED GRANT TO ST. GEORGE'S HOSPITAL.

At the meeting of the Governors and General Council on Dec. 14th, 1910, the report of the Distribution Committee was adopted recommending that a grant of £2000 should be made to St. George's Hospital, but that the grant should be retained until the Fund is satisfied that the relations between hospital and medical school are in accordance with the principles intimated by the Fund in May, 1909. Paragraph (10) of that report as amended and adopted by the Council, and published is as follows:—

Extract from Report of Distribution Committee, December, 1910.

(10) In the case of St. George's Hospital, the Committee have had under their special consideration the appearance, in the general accounts of the hospital for 1909, of certain payments to the school which were stated to be for work done for the hospital and which were formerly paid out of a discretionary fund. The inquiries made by the Committee as to the legitimacy of this change confirmed the statement in the annual report of the hospital that the payments in question were made on account of definite work done, chiefly pathological and bacteriological examinations, in connexion with the actual treatment of patients. That is, the payments were for the kind of work which is described in Appendix III. of the Report of Sir Edward Fry's Committee as work which would have to be paid for in any case, and which would have to be taken into account in assessing the payments and receipts on either side.* Such work, moreover, differs entirely from the general benefits, described in paragraphs 13 to 22 of the Report as being conferred by Medical Schools on hospitals, and as being fairly set off against the benefits conferred by the hospitals on the schools. The opinion of the Fund, that, on the principles laid down by Sir Edward Fry's Committee, specific payments for such definite work done in respect of the treatment of patients, whether made to the school or to any other agency, could be charged to the general funds of the hospital, while no other payments to the school could be so charged, was notified to St. George's, in reply to a question from the hospital, by the Executive Committe in May, 1909. But on looking into the method by which the amount fairly chargeable to the hospital on account of this work had been arrived at, the Distribution Committee came to the conclusion that the apportionment of the expenses of the laboratories as between the treatment of patients and medical education required investigation, and they have invited the hospital to submit further details in order that the Committee may satisfy themselves that the payment made to the school bears a proper proportion to such definite work done for the hospital.

In the meantime they recommend that the grant to the hospital this year should be retained until the Fund is satisfied that the financial relations between hospital and school are in accordance with the principles intimated by the Fund in May, 1909, and that the general account of the hospital in respect of 1909, as well as 1910, is clear from any payment on account of medical education.

The Distribution Committee have been in communication with the authorities of the hospital, and a subcommittee of their members has visited the hospital and inspected the clinical laboratories, museum, and school buildings, and they now desire to lay before the Governors and General Council the following report:—The payments by the hospital in 1909 in respect of the specific work in question consist of the following items: salaries, £1075; cash payment, £550; rent remitted, £250; total, £1875. The committee decided at the outset to make inquiries as to the cost of similar work at other hospitals, for it is evident that if the cost to the hospital of the laboratories is largely in excess proportionately of the cost at other comparable hospitals, the difference requires investigation. The committee, therefore, endeavoured to obtain information enabling them to compare the cost of work done in the interests of the patients in the clinical laboratories at St. George's with that done at similar institutions. In reply to their inquiries they received confidential returns from 19 institutions in London and the provinces, including 11 London hospitals with medical schools. The returns, however, in reference to six institutions were in such a form as to be of no use for the purpose of the investigation. From the figures supplied by the remaining institutions and St. George's Hospital it appeared that the cost of laboratory investigations, &c., at St. George's Hospital worked out at about two and a half times the average, if St. George's was included, or slightly over two and three-quarter times if St. George's was excluded. Differences of cost in this connexion may be due either to differences in the relative amount of the total expenditure on the laboratory work or to differences in the method of its apportionment as between hospital and Medical School. At St. George's the sum paid by the hospital appears from the returns submitted to represent about four-fifths of the total cost, while the school pays about one-fifth.

Before discussing these figures it appears necessary to place before the Council certain changes which have taken place at St. George's Hospital and its Medical School since Sir Edward Fry's Committee reported. Up to the year 1906 the laboratories attached to the hospital were used by the school for the purposes of teaching the earlier subjects of professional study (chemistry, physics, biology, anatomy, physiology, and pharmacology), as well as for any purely hospital work necessary in the interests of the patients. In 1906 the Medical School decided to abolish the teaching of the preliminary and intermediate subjects of the medical curriculum at the hospital, and entered into an arrangement with the London University that these subjects should be taught to their students in the laboratories of the University of London. The changes which have taken place in the medical and surgical treatment of patients during recent years necessitate a much larger amount of laboratory investigation than was formerly the case, and the governing body of St. George's Hospital decided to retain the laboratories for purely clinical purposes, in which the work necessary for the treatment of the patients in or attending the hospital could be carried out, and in which the students at their school could be instructed in the most modern methods of carrying out such investigations.

As a result of an interview with a deputation from the hospital the committee informed St. George's on Nov. 16th, 1910, that in their view the method of apportioning the expenses of these laboratories, upon which the figures then submitted were based, was faulty, and that the remission of rent to the school should not have been left out of the calculation. The Committee further considered that the payment was excessive, that the apportionment between the hospital and the medical school should be revised, and that no payments over and above specific payment for definite work done in respect of the treatment of patients, calculated on the revised method, should be made out of the general fund. On Nov. 30th, the hospital submitted a fresh arrangement of the figures based upon a different method of apportionment and including a payment for rent.

The Distribution Committee have not undertaken a minute examination of this revised basis of apportionment, nor do they desire to call in question the *bona fides* of those responsible for it, though the position may be maintained that the larger part of the expenses of the Pathological Museum should not be borne by the hospital, that a reasonable rent should be charged for the use by students of the hospital laboratories and the school buildings, and, finally, that the department of clinical investigation may have been planned and staffed upon its present basis, not only for the benefit of patients, but as an attraction to students to join the hospital. Instead of entering upon these highly contentious topics, the Distribution Committee prefer to base their report upon the broad ground of comparative cost, and, as there is no reason to suppose that the work done at St. George's differs markedly in quality or quantity from that done at other London hospitals of equal repute, they have come to the conclusion that the Fund ought to mark its disapproval of an expenditure so far in excess of the average, whether such excess arises from extravagance, from a contribution to the Medical School, or from the clinical laboratories being designed not only for hospital requirements, but also for purposes of research.

In making this recommendation, however, the committee desire to state that in their opinion the certificate given to the Fund by the treasurer of St. George's Hospital, to the effect that no payments have been made to or on account of the Medical School for the purposes of medical education, was given in absolute good faith. In a matter of such complexity the committee are not surprised to find that different conclusions as to the proper apportionment of this expenditure should have been reached by different persons, whose *bona fides* is equally unquestioned. Their own conclusion, arrived at after a very careful consideration of all the aspects of the problem, is that a larger fraction of the expenditure on the clinical laboratories and the school buildings should have been borne by the school, and that the school should repay to the hospital in respect of the year 1909 (and if necessary 1910), the difference between the sum of £1000 and the charge borne by the hospital in respect of specific work done for the hospital patients, which amounted in 1909 to £1875.

Sir ERNEST CASSEL seconded the adoption of the report.

In reply to a question by Sir WILLIAM COLLINS, Sir WILLIAM CHURCH pointed out that the adoption of this report did not involve any departure from the rule passed by the Council in accordance with the recommendation of Sir Edward Fry's Committee—viz., that no grant should be made to any hospital which made payments to or on account of its medical school out of general funds subscribed for the relief of the sick poor.

The motion, having been supported by Sir HENRY BURDETT, was put and carried unanimously.

The Bishop of LONDON, in moving a vote of thanks to the

* The following is an extract from this Appendix, which is referred to by Sir Edward Fry's Committee (Report, par. 9), as "The Third Appendix, which we adopt as part of our Report":—"It must be remembered that, apart from these [i.e., the general services rendered by the schools to the hospitals], which are separately dealt with in the Report (par. 21), the schools, in most cases, undertake many specific laboratory examinations solely for the purpose of helping the physicians and surgeons to form correct diagnoses in the exclusive interests of the patients, and that these would have to be paid for by the hospitals in any case. Where such examinations are made in a laboratory entirely maintained by a school, it is obvious that, in any exact assessment of the payments and receipts on either side, they would have to be taken into account."

Duke of Teck for presiding, said there was no one in whom the Council had more confidence, and no one who took greater interest in hospital work.

The resolution was seconded by Mr. C. STUART-WORTLEY and carried unanimously.

The Duke of TECK having briefly acknowledged the vote of thanks, the proceedings then terminated.

Public Health.

ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

The City of Aberdeen.—Dr. Matthew Hay estimates the population of this city in the middle of 1909 at 168,000, as against the estimate of 178,210 by the Registrar-General, and he furnishes as an indication of the diminished growth of the city the fact that for the first time for many years the valuation showed a decrease of £4652, in place of the usual annual increase, which as recently as 1905 amounted to over £30,000. The mortality rates for the year under review are, however, based upon the Registrar-General's estimate, and are consequently all some 8·2 per cent. too low. The percentage of illegitimate births to the total births in Aberdeen during 1909 was 9·2, and Dr. Hay adds that in the large Scottish towns there has since 1903 been a tendency towards an increase in the proportion of illegitimate births. He thinks that the diminishing marriage-rate is the main cause of such increase. In discussing the mortality at the age period 25–60 years, which was for 1909 only 9·5 per 1000, and only about half of the corresponding rate in 1866–75, Dr. Hay expresses the opinion that the scheme of invalidity insurance which the Government is about to submit to Parliament will be of much assistance to workmen at this age-period, in that it will enable the bread-winner of a family to remain at rest after illness until he has fully recovered, the too early return of the workman being responsible for complications and other conditions making for incapacity and early death. This is especially the case with workers afflicted with early pulmonary tuberculosis, an aspect of the question which was thoroughly gone into in the Local Government Board report upon sanatoriums. As Dr. Hay observes, the death-rate at the age-period 60 and upwards will also benefit by the proposed insurance scheme, although the advantage as regards phthisis will be less than in the age-period 25–60 in consequence of the incidence of this disease being much less upon the older age-group than upon the younger. It is also probable, Dr. Hay thinks, that old age pensions will exercise a good effect upon the death-rate of the population generally, not only by prolonging the lives of old people, but also by partly or wholly relieving sons and daughters of contributions which they have hitherto been obliged to make towards the maintenance of aged parents. This is rather a difficult question, but on the whole we are inclined to agree with Dr. Hay, although we suspect that old people are more likely to live longer in a workhouse than outside it. The compulsory notification of measles and whooping-cough was discontinued in February, 1903, and Dr. Hay reiterates the opinion which he expressed some years ago after 20 years' experience of compulsory notification of these diseases, that very little can be done to control the spread of either of these highly infectious maladies, although he admits that some lives could be saved by hospital treatment. He inclines to the view that more room might be found for such cases by excluding a certain proportion of the scarlet fever cases, and he thinks that the time has arrived for a gradual revision of this practice as to removal to hospital of cases of scarlet fever and increased admission of cases of zymotics of a higher case mortality. If scarlet fever in the future manifests a higher case-mortality a return to the present practice might be justified. In the year 1905 Dr. Hay expressed the opinion that typhus fever was probably transmitted by fleas or other body vermin, a view which he is now naturally gratified to find is being supported by experimental evidence. The recent investigations of M. Charles Nicolle and those of Mr. W. James Wilson of Queen's University, Belfast, suggest that the causal organism, which has not yet been separated and identified owing to difficulties of cultivation, exists in the blood. A chimpanzee inoculated with the blood of a patient suffering from typhus fever developed the disease, and from this chimpanzee the disease was transmitted to two other monkeys by means of lice which had fed on the infected chimpanzee and were afterwards allowed to bite the monkeys. In an appendix to the annual report Dr. Hay discusses in highly instructive fashion the behaviour of tuberculosis in Aberdeen.[1] He points out, what is undoubtedly the fact, that the death-rate from tuberculosis is not necessarily a true index of the prevalence of the disease, since it is not improbable that, as with a disease such as scarlet fever, the case mortality may vary greatly. Tables are furnished showing that since 1856–60 the mortality from pulmonary tuberculosis in Aberdeen has fallen from 322 per 100,000 to 108 in 1909, or to almost one-third of what it was 50 years ago, and as regards other forms of tuberculous disease the fall has been greater still—i.e., from 179 per 100,000 in 1856–60 to 53 in 1909. With respect to Scotland as a whole the decline has not been quite so great as in Aberdeen, but it has throughout the whole country been generally greater in the towns than in the country or in the rural districts. Is this because the fittest migrate to the towns or because nutrition is maintained at a higher level owing to the higher wage? With respect to the age incidence of fatal tuberculosis Dr. Hay furnishes a table which shows that during 1905–06 every second death at the age of adolescence was due to tubercle, every third death at the "school" age, and every fifth death at the "mature" age-period, these proportions formerly having been much higher. The sex incidence of tuberculosis is gone into by Dr. Hay in considerable detail, but one point only can be here noticed—i.e., that at the "school" age-period girls have constantly suffered more than boys from phthisis, in recent years nearly twice as much. Dr. Hay suggests that this remarkable difference may be due in part to the larger amount of outdoor play and exercise indulged in by boys, but this theory does not seem to receive support from the fact that at ages under 5 boys tend to suffer from phthisis more than girls. Discussing the causes which have made for the decline of tuberculosis, Dr. Hay emphasises the fact, which is not as generally appreciated as it should be for the most elementary comprehension of the whole subject, that the disease was steadily declining long before the discovery of the tubercle bacillus, and that there has been little, if any, quickening of the rate of fall since that discovery. This is a bed-rock fact which is often overlooked. It is, therefore, as Dr. Hay remarks, plain that the ameliorating agencies have been of a general and not of any specific character, and that social factors have exercised great influence in promoting the decline. The Aberdeen figures do not, Dr. Hay states, support the view that the increasing segregation of consumptive cases in poorhouses, asylums, and infirmaries has been an important factor, at any rate in so far as the first half of the last 50 years is concerned, and he adds that it is only reasonable to infer that the agencies at work in the earlier period have not ceased to be operative in the later period.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8487 births and 5072 deaths were registered during the week ending April 1st. The annual rate of mortality in these towns, which had been equal to 15·4 and 15·2 per 1000 in the two preceding weeks, rose again to 15·4 in the week under notice. During the 13 weeks of the past quarter the death-rate in these towns averaged 15·8 per 1000, and exceeded by 1·0 the exceptionally low rate in the 76 large towns during the corresponding quarter of last year. The annual death-rates during last week in these towns ranged from 4·8 in King's Norton, 7·6 in Bournemouth, 8·1 in West Hartlepool, and 8·6 in Derby; to 21·1 in Devonport, 22·7 in Hastings, 25·8 in Coventry, and 26·8 in Middlesbrough. The 5072 deaths from all causes in the 77 towns showed an increase of 80 upon the number returned in the previous week, and included 661 which were referred to the principal epidemic diseases, against 702, 695, and 678 in the three preceding weeks; of these 661 deaths, 378 resulted from measles, 141 from whooping-cough, 58 from infantile

[1] See also THE LANCET, March 18th, 1911, p. 770.

diarrhœa, 50 from diphtheria, 19 from scarlet fever, and 15 from enteric fever, but not one from small-pox. The annual death-rate in the 77 towns from these epidemic diseases averaged 2·0 per 1000, against 2·1 in the three preceding weeks. The fatal cases of measles in the 77 towns, which had been 474, 460, and 403 in the three preceding weeks, further declined last week to 378; the highest annual death-rates from this disease among these towns last week were 2 9 in Middlesbrough, 3·1 in Dewsbury, 5·2 in Rhondda, 6 2 in Sheffield, and 7·3 in Devonport. The deaths from whooping-cough further rose last week to 141, from 80, 109, and 136 in the three preceding weeks; they caused death-rates equal to 1·1 in Blackburn, 1·2 in Southampton, 2·4 in Middlesbrough, and 2·7 in Willesden. The 58 deaths of infants under 2 years of age attributed to diarrhœa also showed a slight further increase upon recent weekly numbers. The deaths referred to diphtheria, which had been 44 and 48 in the two previous weeks, further rose last week to 50, and included 14 in London and its suburban districts, 5 in Liverpool, 4 both in Manchester and in Leeds, and 3 in Nottingham. The 19 fatal cases of scarlet fever were fewer than in any previous week since the end of January; 3 were recorded in London. Of the 15 deaths referred to enteric fever, exceeding the number in the previous week by 1, 6 were registered in Manchester and Salford. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospital, which had steadily declined in the six preceding weeks from 1278 to 1077, had further fallen to 1036 on Saturday last; 125 new cases of this disease were admitted to these hospitals during last week, against 146 and 121 in the two preceding weeks. These metropolitan hospitals also contained on Saturday last 914 cases of measles, 883 of diphtheria, 275 of whooping-cough, 32 of enteric fever, and 28 of small-pox. The 1488 deaths from all causes in London last week were equal to an annual rate of 15·8 per 1000 (against 15·4, the mean rate in the 77 towns), and included 324 which were referred to diseases of the respiratory system, against 284 and 295 in the two preceding weeks; 9 deaths were directly referred to influenza. In the 77 towns 167 deaths were attributed to different forms of violence during the week, against 142, 156, and 151 in the three preceding weeks; and 386 inquest cases were registered The causes of 42, or 0·8 per cent., of the deaths registered in the 77 towns during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Hull, Nottingham, Leicester, and Salford, and in 48 smaller towns; the 42 uncertified causes of death in the 77 towns last week included 8 in Birmingham, 7 in Liverpool, and 3 each in South Shields, Gateshead, and Smethwick.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 963 births and 573 deaths were registered during the week ending April 1st. The annual rate of mortality in these towns, which had been equal to 15·9, 16·8, and 17·2 per 1000 in the three preceding weeks, declined again to 15·6 in the week under notice. During the first 13 weeks of the past quarter the death-rate in these towns averaged 16·8 per 1000, and exceeded by 1·0 the mean rate during the same period in the 77 English towns. The annual death-rate last week in the eight Scotch towns ranged from 9·4 and 12·6 in Aberdeen and Paisley, to 20·8 in Perth and 22·5 in Greenock. The 573 deaths from all causes in the eight towns last week showed a decline of 60 from the increasing numbers in recent weeks, and included 43 which were referred to the principal epidemic diseases, against 66 and 55 in the two previous weeks; these 43 deaths were equal to an annual rate of 1·2 per 1000, which was 0·8 below the rate from the same diseases in the 77 English towns; the highest rates from these diseases in the Scotch towns last week were 2·4 and 2·8 in Leith and Perth. Of these 43 deaths from these diseases in the eight towns last week 28 resulted from whooping-cough, 8 from diarrhœa, 3 from diphtheria, 3 from scarlet fever, and 1 from measles, but not one either from small-pox or from enteric fever. The fatal cases of whooping-cough, which had been 36 and 32 in the two previous weeks, further declined to 28 last week, of which 16 occurred in Glasgow, 4 in Leith, and 2 each in Dundee, Paisley, and Greenock. The 8 deaths attributed to diarrhœa (6 of which were of infants under two years of age) showed a decline from the numbers in recent weeks, and included 4 in Glasgow and 2 in Aberdeen. The 3 deaths referred to diphtheria were fewer than in any recent week, and were all recorded in Glasgow. The 3 fatal cases of scarlet fever occurred in Glasgow, Edinburgh, and Perth; and that of measles in Perth. The deaths referred to diseases of the respiratory system in the eight towns, which had been 109 and 115 in the two previous weeks, declined again to 109 last week, and were 13 below the number in the corresponding week of last year. The 22 deaths attributed to different forms of violence in the eight towns were within one of the number in the previous week; and 175, or 31 per cent., of the 573 deaths from all causes occurred in public institutions. The causes of 20, or 3·5 per cent., of the deaths registered last week in the eight towns were not certified or not stated; in the 77 English towns last week the proportion of uncertified causes of death did not exceed 0·8 per cent.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,163,596 persons, 724 births and 461 deaths were registered during the week ending April 1st. The annual rate of mortality in these towns, which had been equal to 17·4 and 21·2 per 1000 in the two preceding weeks, declined again to 20·7 in the week under notice. During the 13 weeks of the past quarter the annual death-rate in these towns averaged 20·5 per 1000; the rate during the same period did not exceed 15·8 in the 77 English towns, and 16·8 in the eight Scotch towns. The annual death-rate during last week in the Irish towns was equal to 21·5 in Dublin (against 15·8 in London), 18·1 in Belfast, 19·2 in Cork, 22·6 in Londonderry, 31·4 in Limerick, and 23·4 in Waterford; in the 16 smallest of the Irish towns the mean annual death-rate last week was equal to 22·0 per 1000. The 461 deaths from all causes in the 22 towns last week showed a decrease of 11 from the number in the previous week, and included 21 which were referred to the principal epidemic diseases, against 21 and 23 in the two previous weeks; these 21 deaths were equal to an annual rate of 0·9 per 1000, which was 1·1 below the mean rate from the same diseases in the 77 English towns. These 21 deaths in the Irish towns last week from the principal epidemic diseases included 8 from whooping-cough, 5 from measles, 3 from diphtheria, 3 from diarrhœa, and 2 from enteric fever, but not one either from scarlet fever or from small-pox. The 8 fatal cases of whooping-cough exceeded the number in the previous week by 2, and included 5 in Dublin and 3 in Londonderry. The 5 deaths from measles also showed an increase; 3 occurred in Drogheda and 2 in Dublin. Of the 3 deaths referred to diphtheria, 1 each occurred in Dublin, Belfast, and Londonderry. The 3 deaths attributed to diarrhœa were fewer by 5 than the number in the previous week. The 2 deaths referred to enteric fever were recorded in Dublin and Galway. The deaths in the 22 towns referred to diseases of the respiratory system, which had been 90 and 94 in the two previous weeks, further rose to 107 last week. Of the 461 deaths from all causes last week, 136, or 30 per cent., were recorded in public institutions. The causes of 12, or 2·6 per cent., of the deaths in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of death last week did not exceed 0·8 per cent. in the 77 English towns, and was 3·5 per cent. in the eight principal Scotch towns.

INTER-COLLEGIATE SCHOLARSHIPS BOARD.—The London Inter-Collegiate Scholarships Board announces that an examination will be held on May 9th for 18 entrance scholarships and exhibitions of an aggregate total value of about £1500, open to men and women, and tenable in the Faculties of Arts, Science, and Engineering of University College, King's College, and the East London College. Particulars and entry forms may be obtained from the secretary of the board, Mr. A. E. G. Attoe, University College, Gower-street, W.C.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon Horatio Septimus Richard Sparrow has been placed on the retired list at his own request, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated March 31st, 1911).

The following appointments are notified:—Fleet-Surgeon J. H. Stenhouse to the *Africa*, on recommissioning. Staff-Surgeons: J. Boyan to the *Africa*, additional; R. Waterfield and T. F. O'Keefe to the *Implacable*, on recommissioning; H. Huskinson to the *Bulwark*, on recommissioning; F. C. B. Gittings to the *Adventure*, on recommissioning; J. Whelan to the *Vivid*, additional, for disposal; G. E. Macleod to the *Sentinel*, on recommissioning; N. J. Roche to the *Jupiter*, additional; and H. R. H. Denny to the *Vivid*, additional. Surgeons: F. J. Gowans to the *Victory*, additional; A. G. Malcolm to the *Pembroke*, additional, for disposal; A. T. Rivers and A. H. Joy to the *Africa*, additional; A. W. Iredell to the *Victory*, additional; F. H. Hall to the *Pomone*, additional, for Dartmouth College; and B. Pick to the *Vivid*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Surgeon-General G. W. Robinson, Administrative Medical Officer, Cape Town, has taken up duty as Principal Medical Officer of the Aldershot Command, in succession to Surgeon-General Sir Thomas Gallwey, K.C.M.G., C.B. Brevet-Colonel F. J. Lambkin has been appointed an Administrative Medical Officer in South Africa. Lieutenant-Colonel A. E. Morris has taken over charge of the Military Hospital at Cork, and has been appointed Senior Medical Officer of the South Irish Coast Defences, vice Lieutenant-Colonel T. E. Noding, transferred to Hilsea. Lieutenant-Colonel W. J. Baker, Senior Medical Officer at Cairo, has arrived home. Lieutenant-Colonel W. Dick has vacated his appointment as Administrative Medical Officer at Woolwich. Brevet-Colonel R. S. F. Henderson, K.H.P., Secretary to the Principal Medical Officer, His Majesty's Forces in India, has been selected for the higher rate of pay under Article 317 of the Royal Warrant, vice R. I. D. Hackett promoted. An exchange on the roster for service abroad has been approved by the War Office between Lieutenant-Colonel N. C Ferguson, C.M.G., Queen Alexandra's Military Hospital, Millbank, and Major A. H. Waring in charge of the Military Hospital at Portland. Major C. H. Hale, D.S.O., has been appointed to the Station Hospital at Kamptee. Major B. Watts, specialist in midwifery and diseases of women and children, has been transferred from Campbellpore to the Station Hospital at Meerut for duty. Major C. H. Young has taken up duty as Staff Officer to the Administrative Medical officer of the Welsh Division at Shrewsbury. Major H. E. Staddon has been placed under orders to join the Eastern Command for duty. Major D. D. Shanahan has taken up duty at Ootacamund as Staff Officer of Medical Mobilisation Stores for the Ninth (Secunderabad) Division in succession to Major H. A. Hinge, tour-expired. Major S. H. Fairrie has been transferred from Shorncliffe to Shoeburyness. Major W. B. Winkfield, from Portland, has joined for duty at the Station Hospital, Agra. Captain G. J. Houghton, Captain T. B. Unwin, Captain J. T. McEntire, and Captain J. Fairburn have embarked for a tour of service on the West Coast of Africa (Sierra Leone Protectorate). Captain D. O. Hyde has taken up duty as Staff Officer to the Administrative Medical Officer of the West Riding Division. Captain G. W. G. Hughes, Captain G. De la Cour, and Captain C. Kelly have arrived home on leave of absence from service abroad. Captain F. D. G. Howell, at present serving in India, has been granted six months' leave of absence home. Captain F. W. W. Dawson has been posted to the Dublin District for duty. Captain L. F. F. Winslow has joined at Pontefract. Captain F. S. Walker has been transferred from Fermoy to Queenstown. Captain D. P. Johnstone has been detailed for duty at Seaforth. Captain C. P. O'Brien Butler has been transferred from the Station Hospital at Poona for duty at Purandhar. Captain H. V. Bagshawe has joined at Sheffield. The following Lieutenants have embarked for a tour of service in India: C. H. O'Rorke, C. G. Sherlock, S. W. Kyle, J. W. Lane, A. T. J. McCreery, D. S. Buist, D. E. C. Pottinger, and R. H. Nolan. The following Lieutenants on probation have been posted for duty at the military hospitals named: C. H. H. Harold, London; E. L. Fyffe, Cork; R. F. Bridges, Shorncliffe; T. J. Hallinan, Fermoy; J. D. Bowie, Aldershot; C. H. Stringer, Netley; G. O. Chambers, York; J. K. Gaunt, Fermoy; and L. F. K. Way, Cosham.

ARMY MEDICAL SERVICE.

Colonel Arthur P. O'Connor, C.B., on completion of four years' service in his rank, retires on retired pay (dated April 5th, 1911).

Brevet-Colonel Francis J. Lambkin, from the Royal Army Medical Corps, to be Colonel, vice A. P. O'Connor, C.B. (dated April 5th, 1911).

INDIAN MEDICAL SERVICE.

The King has approved of the following promotions of officers of the Indian Medical Service:—Captains to be Majors: Edward David Wilson Greig, Campbell Dykes, William Frederic Harvey, William Charles Hughan Forster, John Johnson Urwin, David McCay, Arthur Brownfield Fry, Edward Cecil Gordon Maddock, Arthur William Tuke, and George Herbert Stewart (dated Jan. 28th, 1911). Lieutenants to be Captains: Alexander Patrick Gordon Lorimer (dated Nov. 7th, 1910), Robert Knowles, Wilfrid Edward Brierley, James Burne Lapsley, James Alfred Shorten, Robert Beresford Seymour Sewell, Charles Henry Fielding, William Linton Watson, Francis Romney Coppinger, Wilfrid James Simpson, Frederick Stevenson, Stephen Harold Middleton-West, Satya Charan Pal, and Reginald Stephen Townsend (dated Feb. 1st, 1911).

Surgeon-General Lukis, C.S.I., Director-General of the Indian Medical Service, has taken over the duties of Sanitary Commissioner with the Government of India during the absence on leave of Lieutenant-Colonel J. T. Leslie, C.I.E. The Lieutenant-Governor of the Punjab (Sir Louis Dane, K.C.S.I.) has been pleased to promote Lieutenant-Colonel D. T. Lane to be a Civil Surgeon of the First Class. Lieutenant-Colonel J. Chaytor-White, Sanitary Commissioner of the United Provinces, has been granted an extension of his leave of absence for six months on medical certificate by His Majesty's Secretary of State for India. Lieutenant-Colonel H. B. Melville has been confirmed in the appointment of Civil Surgeon of Simla (East). Lieutenant-Colonel R. C. MacWatt, Bengal, residency surgeon in the Western States of Rajputana, has been granted privilege leave and furlough for two years out of India. Lieutenant-Colonel G. H. Baker has been appointed to officiate as a Civil Surgeon of the First Class during the absence on leave of Lieutenant-Colonel J. J. Pratt. Major T. W. Irvine, Bombay, has been posted on return from leave as Civil Surgeon, Peshawar. Major R. Bryson has been granted leave of absence home from India until Oct. 7th, 1912. Major A. Leventon has been appointed Civil Surgeon at Darrang. Major W. Lethbridge, an agency surgeon of the second class, Madras, has been appointed as Medical Officer of the Mewar Bhil Corps. Major C. Donovan has returned to Madras on completion of his leave of absence. Major E. J. O'Meara has been appointed Civil Surgeon at Naini Tal. Major A. Miller has been granted leave of absence home from India for 18 months. Major S. Browning-Smith, Officiating Sanitary Commissioner, Eastern Bengal and Assam, has taken over duty as Chief Plague Medical Officer, Punjab, from Captain C. A. Gill transferred. Major F. D. S. Fayrer has joined for duty at Dera Ismail Khan as Civil Surgeon. Major J. N. Macleod has been posted to Quetta as Civil Surgeon on the expiration of his furlough. Captain V. B. Green-Armytage has taken up duty as Specialist in Midwifery and Diseases of Women and Children, Burma Division. Captain S. B. Metha has been appointed District Plague Medical Officer at Lyallpur. The services of Captain W. S. J. Shaw have been placed permanently at the disposal of the Government of Burma. Captain N. S. Sodhi has been appointed to Gurgaon as Plague Medical Officer. The services of Captain R. A. Chambers have been placed at the disposal of H.E. the Commander-in-Chief in India. Captain W. G. Wright, medical officer in charge of the 10th Mahratta Light Infantry, has been granted one year's leave of absence home from India. Captain A. W. M. Harvey has been appointed to Bengal Presidency for civil employment. The services of Captain W. L. Harnett have been placed at the disposal of the Government of India for

civil employment in Eastern Bengal and Assam. Captain G. J. G. Young has been granted leave of absence for one year home from India. Lieutenant A. S Khan has been appointed Specialist in Radiography and Electrical Science to the Ninth (Secunderabad) Division. Lieutenant A. MacD. Dick has taken up duty as Specialist in Advanced Operative Surgery to the Burma Division.

ROYAL NAVAL RESERVE.

In accordance with the provisions of Order in Council of April 1st, 1881, Fleet-Surgeon George Henry Foott has been placed on the Retired List at his own request (dated March 30th, 1911).

TERRITORIAL FORCE.

Royal Army Medical Corps.

Attached to Units other than Medical Units.—Captain Andrew R. Wilson to be Major (dated July 4th, 1910). Lieutenant John A. Nixon to be Captain (dated Dec. 22nd, 1910).

For Attachment to Units other than Medical Units.—Bernard Richardson Billings to be Lieutenant (dated March 1st, 1911). Francis Vincent Denne to be Lieutenant (dated March 16th, 1911).

THE CARE OF THE WOUNDED IN A NAVAL ACTION.

Marine Oberstabsarzt (Fleet-Surgeon) Dr. zur Verth, of the German navy, a well-known writer, contributes to the *Marine Rundschau* for March an article dealing with the organisation of the work of the medical staff of a man-of-war during an action, discussing, too, the number of assistants wanted and the system necessary to secure for the greatest number of wounded the best results from the attention and skill of the medical officers. As he notes, very little information on this subject can be gleaned from the meagre accounts so far published of the treatment of the wounded in recent naval wars, which, besides, were fought between very unequal opponents. In a war between antagonists of nearly equal strength and character, the number of the wounded will probably be larger than these other wars lead us to expect, and the difficulties in dealing with them will be proportionately increased. The number of casualties is usually estimated at about 20 per cent., 4 per cent. killed, 8 per cent. severely, and another 8 per cent. slightly, wounded. In the French wars the losses in action may be said to have been about 10 per cent. for the victors (2½ per cent. killed, 7½ per cent. wounded), but the unsuccessful ships lost about 30 per cent. In a naval battle everyone expects that the wounded will come down to the surgeons in batches after each passage of arms between ships. If there are but few they can be readily managed, but if there are many some very exact and carefully calculated system for selecting them must be followed, or time will be wasted on slight cases, which are best able to press themselves on the notice of the surgeons, and some serious cases that might have been saved by early attention will fail to get that, and so unnecessary losses will occur, and disastrous sequelæ will appear that a better system might have avoided. The wounds in a naval action will be more serious than in a land battle, for they will be in greater proportion artillery wounds and due to fragments of shells and to flying splinters of the ship. On the other hand, there will be less risk of wound infection, for each man will have had a bath before going into action, and will wear, as the Japanese experience has shown to be so necessary, a clean suit of clothes. Further, the wounded man will not long be left untended after his injury, as his food is always with him in the ship he will not risk starvation, and sea transport will take him comfortably afterwards to his home hospital; so, Dr. zur Verth very justly concludes, the man wounded on board a ship will recover more quickly and more satisfactorily than the soldier who has fallen on a wide extended modern battlefield. He proposes, therefore, that the medical officers on board shall specialise their work: that one shall see and classify all the wounded, passing suitable cases to the other, the principal medical officer on board or that one of his assistants whom he has chosen because of his special surgical ability to be the operator. The classifying surgeon will decide that he or his ambulance party can give to one section the first-aid treatment which is all they require, that another section should be sent on to the operator, and that a third section are so severely injured that they cannot be radically dealt with on board but can only receive, here and now, palliative treatment. With him he will have a writer who shall take the notes dictated to him for the medical returns, two trained ambulance men, and two sick-bearers, who shall take the wounded to the operator or remove those who have got first aid to the place pre-arranged for them. Here also will be the paymaster and a clerk to take the names of the wounded, with a rough statement of the position and nature of the injury for the captain's information; they will receive any personal property the wounded may desire to have cared for, and will note any messages the more gravely injured have for their friends. The operator must obviously keep his hands surgically clean, so must not be required to deal with patients as they arrive, but only after their injuries have been examined and the need for operation has been decided. After the operation the adjustment of splints, application of plaster-of-Paris, and other measures which would harm the aseptic condition of the operator's hands must be given over to the classifying surgeon or to some other assistant. The operations mentioned as likely to be required here are for arrest of hæmorrhage, tracheotomy, and urgent amputations. The operator has an experienced man of the sick berth staff to give chloroform, another (preferably, of course, a medical officer, if a third is available), with aseptic hands, to assist him, and four of the ambulance party to bring and to remove cases after operation. There must be also a second dressing station with a reserve of medical and surgical stores, established at some distance away in case the main "treatment station" is seriously damaged. Dr zur Verth concludes in saying that, like every other operation of war, the technique of surgical wound treatment in battle must be carried out on a well-thought-out and precisely ordered system, for only the man who has carefully forecast all the phases and chances of an action it is who will not be taken at a disadvantage, and of all these phases the least easy to picture during peace time are the medical emergencies.

DEATHS IN THE SERVICES.

Surgeon-General Jeffrey Allen Marston, C.B., honorary surgeon to the King, at his residence, Nevern-square, London, on March 31st, aged 79. He entered the service as assistant surgeon in 1854, became surgeon in 1867, surgeon-major in 1873, deputy surgeon-general in 1882, and surgeon-general in 1889, in which year he retired. He served in the Egyptian war of 1882 as sanitary officer, and was present at the battle of Tel-el-Kebir (mentioned in despatches, promoted deputy surgeon-general, medal with clasp, Third Class of the Osmanieh, and Khedive's Star). An obituary notice of our old friend and colleague will be found on p. 974 of our present issue.

Colonel Douglas Wardrop, C.V.O., has succeeded Lieutenant-Colonel C. R. Kilkelly, C.M.G., M.V.O., as House Governor and Medical Superintendent of King Edward's Convalescent Home for Officers at Osborne, Isle of Wight.

The Royal Military Academy at Woolwich has been closed till April 27th in consequence of the epidemic of measles.

LEEDS PUBLIC DISPENSARY: DENTAL DEPARTMENT.—It has been arranged that the members of the honorary staff of the dental department of the Public Dispensary shall in future hold office under the same conditions as to length of service as exists in the case of the honorary physicians and surgeons. At a meeting of the special election committee recently held the following members of the dental staff were appointed to their former positions under the new conditions—viz.: Mr. P. T. Leigh, Mr. W. Marston, Mr. A. G. G. Plumley, Mr. S. D. Hey, Mr. D. Saville, and Mr. J. Newsome Taylor as honorary dental surgeons; and Mr. T. Mitchell, Mr. J. W. Mower, and Mr. G. A. Phillips as honorary assistant dental surgeons. On the junior staff there were three vacancies which were filled by the election of Mr. J. V. Lambert, Mr. H. A. Mahony, and Mr. H. R. Bentley. In the history of the dental school perhaps the last of these appointments may be regarded as having a special significance, for Mr. Bentley is a Leeds student who took out the whole of his curriculum at Leeds, and is now identified with the school in another capacity. Those who interested themselves in the foundation of the Leeds School of Dentistry have reason to be pleased with the progress it has made, whether this be gauged by the amount of work done or by the increasing number of students in attendance.

Correspondence.

"Audi alteram partem."

A COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION ON THE TREATMENT OF FRACTURES.

To the Editor of THE LANCET.

SIR,—The Council of the British Medical Association has appointed a committee with the following reference:—

To inquire into and report on the ultimate results obtained in the treatment of simple fractures with or without operation.

The committee is desirous of having the assistance and coöperation of such surgeons, surgical registrars of hospitals, and other practitioners throughout the country as may be in a position to assist the inquiry by letting the committee have access to records of suitable cases, and by affording assistance in following up the patients to whom the records relate. The investigations of the committee will be limited to simple fractures of the long bones which have occurred within the five years from January, 1906, to December, 1910.

We shall be glad if members of the profession able to help the committee in the ways stated will kindly communicate with the Medical Secretary of the Association, 429, Strand, W.C.—We are, Sir, yours faithfully,

HENRY T. BUTLIN,
President of the Association.
EWEN J. MACLEAN,
Chairman of Representative Meetings.
J. A. MACDONALD,
Chairman of Council.
EDWIN RAYNER,
Treasurer.
W. J. GREER,
Chairman of Committee on Treatment of Fractures.
FRANK M. POPE,
Chairman of Science Committee.
VICTOR HORSLEY,
President of Section of Surgery, Annual Meeting, 1910.

April 4th, 1911.

CHARLES BELL AND THE MOTOR AND SENSORY FUNCTIONS OF THE SPINAL NERVES.

To the Editor of THE LANCET.

SIR,—Professor A. Keith—unintentionally, no doubt—raises several false issues in his last letter of April 1st, and continues to avoid the main question as regards the sensory and motor functions of the spinal roots. The only allusion he makes to the true issue is to adhere to his narrative of March 18th (p. 764 *q.v.*), which in my letter of March 25th (p. 835 *q.v.*) I have stated to be on the same footing as Alexander Shaw's narrative of 1839 from which it is taken—not entitled to rank as evidence. Both narratives are, as a matter of fact, absolutely contradicted by the authoritative publications of 1811 and of 1821–22. So much for the true issue. As to the false issues, I will deal with them *seriatim* and quite briefly.

1. Professor Keith is altogether mistaken in his surmise that my attitude of mind *re* the functions of the roots has anything to do with any views he imagines I may hold about vivisection.

2. Professor Keith's description of Bell's scientific work during the period 1807–22 is purely imaginary, and is abundantly contradicted by Bell's own letters of the period, to which Professor Keith appeals as authoritative. As a matter of fact, Bell's scientific output from 1807 to 1822 was confined to the privately printed "Idea of a New Anatomy of the Brain" in 1811, followed after a silent interval of ten years by the two papers on the Nerves of the Face, read before the Royal Society in 1821 and 1822. The only experiment Bell ever made on the spinal roots is that described in 1824 ("An Exposition," &c., p. 29), as quoted in full in the footnote of my letter of March 25th. The "Idea, &c.," of 1811 contains no experiment of any sort, being wholly and solely an essay in speculative anatomy, concerning which Bell writes in 1807 ("Letters," p. 118): "My object is not to publish this, but to lecture it—to lecture to my friends—to lecture to Sir Joseph Banks's coterie ("Letters," p. 22)—to make the town ring with it, as it is the only new thing that appeared in anatomy since the days of Hunter." And in 1811 ("Letters," p. 190): "But my serious study will be the small ornate account of the anatomy of the brain. On this I shall swell myself into importance and make myself very happy ....." And in 1822 ("Letters," p. 275): "My discoveries have made more impression in France than here, and I have received a second message from Majendie saying that if I would send them any short account I should have the prize medal. This is a ridiculous thing for an old fellow, but I mean it to recoil on them here." But in any case Professor Keith's random statement that "Bell's paper of 1821 on the nerves of the face represents only a small part of the work done, and discoveries made, by Bell between 1807 and 1822," does not touch the main question.

3. Professor Keith's quotation in italics of a sentence of mine relating to John Shaw's visit to Paris in 1821, carefully separated from context and references of my letter, in order to illustrate my "unexpected laxity," is, when accompanied by context and references, as accurate as possible consistently with reasonable brevity in dealing with one of the side issues raised by Professor Keith. Magendie did in 1821 (*J. de Ph.*, I., p. 384, *et seq.*) give a very full and clear account of Bell's work as recorded in Bell's paper of July 12th, 1821, and communicated to him by John Shaw in the following month; and Magendie did, in the course of the next year, 1822 (*J. de Ph.*, II., p. 66), acknowledge receipt of the paper itself, and publish a translation of its experimental portion. (As a matter of fact, Bell was nearly as wide of the mark about the fifth nerve as he was about the spinal roots, but that question need not be discussed now. It was and is a side issue in 1822 and in 1911 respectively and it cannot be discussed briefly.) I venture to think that it might be useful to your readers if you would at this stage separate wheat from chaff as regards the spinal roots and sum up the conclusions to be drawn from this somewhat lengthy correspondence. Professor Keith expresses himself as satisfied with his statements, and I am satisfied with mine. The question is, Did Bell or Magendie discover the motor and sensory functions of the anterior and posterior roots of the spinal nerves? I say that it was Magendie, and that Bell's claim does not bear investigation.

I am, Sir, yours faithfully,
A. D. WALLER.

Physiological Laboratory, University of London,
April 3rd, 1911.

DIET AND INOPERABLE CANCER.

To the Editor of THE LANCET.

SIR,—My attention has been called to a letter from Dr. Alexander Haig upon this subject in your issue of Jan. 14th last. Dr. Haig invites coöperation in trying the effect of "uric acid-free" diet upon patients suffering from inoperable cancer, stating that he has seen "cases that gave the impression that by alteration of diet we may sometimes cure."

I am able to meet Dr. Haig's difficulty in getting suitable cases for this trial of his diet as I have 20 patients suffering from inoperable malignant disease continuously under my care in the wards of the Cancer Hospital. The medical and house committees of this institution welcome the scientific trial of any reputed remedy for cancer, always provided such remedy does not in the end entail more bodily or mental discomfort than the disease from which the patient is suffering. I am, of course, unable to transfer these patients to the hospitals in which Dr. Haig is directly interested, but I am prepared to set aside the 30 or 40 cases (which Dr. Haig considers would constitute a good trial of his treatment) to be dieted on whatever lines he may lay down, assuring him that such lines will be most strictly carried out. I should reserve to myself and to my assistant the right of supervising the usual clinical and pathological observations now being made upon all our cases, and should of necessity retain my responsibility for the patients' welfare to the committee of the hospital in the matter of deciding whether or no the treatment should be continued in any case in which the effect might seem undesirable. Neither of these reservations, however, would impair Dr. Haig's efforts;

indeed, I hope the former reservation would be of assistance to him. I may add that it would be easy to select a sufficient number of cases fulfilling Dr. Haig's desideratum—viz., carrying an expectation of life of at least six months.

I am, Sir, yours faithfully,

THOMAS J. HORDER,
Physician to the Cancer Hospital, London.

Harley-street, W., April 3rd, 1911.

THE VACANCY ON THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—In your admirable notice of the career of the late Dr. L. S. McManus, whose death all will deplore, you state that an election of a Direct Representative will be necessitated to fill the vacancy, but that such election may be postponed until the autumn, so that the four Representatives may be elected simultaneously. I fail to see how this simultaneous election can be effected. By the Medical Act, 1886, each Direct Representative is elected for a period of five years, and it is enacted that should a death vacancy occur as "soon as conveniently may be" after that occurrence the President shall issue his precept to the Branch Council for that part of the United Kingdon in which such Representative was elected, requiring the said Branch Council to cause a Representative to be elected by the registered medical practitioners resident in that part of the United Kingdom within 21 days after the receipt of the precept. The remaining Direct Representatives are, for England, Dr. Langley Browne, whose term of office does not expire until Dec. 12th, 1911, and Dr. H. A. Latimer, whose office expires on Jan. 1st, 1912. The Scotch Representative, Dr. N. P. Walker, also holds office until Jan. 1st, 1912; and the Representative for Ireland, Dr. L. Kidd, until Feb. 28th, 1916. Unless, therefore, Dr. Latimer, Dr. Langley Browne, and Dr. Walker resign their offices in the autumn, which no one would reasonably require them to do in the face of a session in November at which they would have the right to be present, and the present vacancy is held over until then, a simultaneous election is impossible. To withhold the election to fill the death vacancy which has occurred until December surely could not be held to be a carrying out of the enactment of 1886, as it would not be "as soon as conveniently may be" after the date of the vacancy which has taken place. There is no legal or moral authority to force either of the present Representatives to cease to hold office until such is automatically determined by effluxion of time. As it is, we shall be short of a Representative at the May session unless the General Medical Council move quickly in the matter of the new election. Two elections in this year will entail considerable trouble and expense upon the General Medical Council and some inconvenience to the electors, but these must be borne with the usual patience and resignation which are the attributes of medical practitioners generally; and we must all unite to send in to the Council one worthy to follow in the footsteps of Dr. McManus as a *persona grata* both to his colleagues and the Council.

I am, Sir, yours faithfully,

March 31st, 1911. A. G. BATEMAN.

TRAINING AND ROWING.

To the Editor of THE LANCET.

SIR,—A comparison of the effects of training upon the weights of the two University crews who rowed in last Saturday's race is of interest:—

	Oxford Crew. Gain in lb.	Loss in lb.	*Cambridge Crew.* Gain in lb.	Loss in lb.
Bow	2½	—	—	3
2	0	—	—	4½
3	½	—	—	14
4	—	1	—	6
5	1½	—	¼	—
6	—	1½	—	6½
7	2½	—	—	8
Stroke	0	—	—	2
	7 lb.	2½ lb.	¼ lb.	44 lb.

It will be seen that two of the Oxford crew remained the same weight, that four between them gained 7 lb., and that two between them lost 2½ lb., leaving a balance of 4½ lb. to the good for the Oxford men.

Of the Cambridge crew, only one man put on weight, and this to the extent only of ¼ lb., while the remaining seven between them lost 44 lb., the individual losses varying from 2–14 lb. Thus the Cambridge eight lost 43¾ lb.

The fact that the crew which won easily in record time actually put on weight as the result of their training, while the losing crew lost more than 3 stones, suggests that in selecting a crew preference should be given to men who do not need to be trained down. Very significant is the fact that while the losing eight were all rowed out at the end of the race, the only Oxford man to show signs of exhaustion was one of the two Oxford men who lost weight.

I am, Sir, yours faithfully,

Wimpole-street, W., April 2nd, 1911. HARRY CAMPBELL.

MARKHAM *v.* ABRAHAMS.

To the Editor of THE LANCET.

SIR,—It is curious that the writer of your article on the Markham *v.* Abrahams case which appeared in THE LANCET of March 25th last misses the chief and only real conflict of medical opinion at the second trial—namely, the question whether an increase in conicity estimated at 4 D. could or could not occur in about seven months.

As to the frequency of conical cornea, had the writer of the article had access to the shorthand notes of the evidence he would have seen that when questioned on the point I disclaimed the possession of any personal figures. I quoted from the most recent and authoritative estimates with which I am acquainted—viz., those brought forward in a discussion on conical cornea which took place at the French Ophthalmological Society in May, 1899. They are as follows:—

Holth	reports	0	cases in	35,000	eye patients.
Péchin	,,	0	,, ,,	10,000	,,
Komde	"scarcely 1	case"	,,	10,000	,,
Axenfeld	reports	1	case ,,	25,000	,,
Antonelli	,,	3	cases ,,	30,000	,,
Parisotti	,,	10	,, ,,	40,000	,,
Vacher	,,	20	,, ,,	40,000	,,
Wicherkiewicz	about 30		in 120,000 to 150,000		,,

The figures given above work out at 1 case of conical cornea in 13,000 eye patients. My estimate, therefore, of 1 in 10,000 patients was within the mark, more especially as the source of my information was understood.

The writer of your article takes the view that the detection of "even the quite early stages of conical cornea" is a simple matter. Cases by Morax and by Kopff respectively, however, prove the contrary. There is a stage when only an examination of the catoptric images from the surface of the cornea will lead to a correct diagnosis, and that implies the possession of an ophthalmometer or some similar appliance. Later on, of course, the informed use of the ophthalmoscopic mirror is adequate. But the play of the retinoscopic shadows would be difficult for an optician to detect, more especially as he would be working with eyes the pupils of which were not dilated by drugs. At all events (to make a confession), I have at this moment more than one patient under observation in whom I suspect, but cannot assure myself of, the existence of a very early stage of keratoconus.

I am, Sir, yours faithfully,

SYDNEY STEPHENSON.

Welbeck-street, W., March 31st, 1911.

THE LANTERN TEST FOR COLOUR BLINDNESS.

To the Editor of THE LANCET.

SIR,—I hardly understand why Mr. Baldwin has written the letter which appears in THE LANCET of to-day. His letter in THE LANCET of 1890 is before me now and is obviously of a later date than the publication of my first papers. He has concluded quite erroneously that my thesis was not of a practical nature. The thesis formed the foundation of my book on colour blindness in the International Scientific Series.—I am, Sir, yours faithfully,

F. W. EDRIDGE-GREEN.

Institute of Physiology, University College, Gower-street, W.C., April 1st, 1911.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Medical Inspection of Schools.

Dr. G. A. Auden, in his second annual report, gives the following list of defects found during 1910. The total number of children examined was 24,363. Defective vision (6/12 or less), 2691; squints, 891; corneal ulcers, opacities, and keratitis, 179; other defects, 459. Defective hearing, 1631; otorrhœa, 451. Tonsils or adenoids, 1663. Undoubted phthisis, 33; doubtful phthisis, 81; other lung diseases, 191. Heart disease, congenital 26, acquired 172. Chorea, 42; epilepsy, 37. Hernia, 92. Anæmia, marked cases only, 70. Speech defects, 121. Deformities, excluding paralyses, 260; paralysis of lower limbs, 41; upper limbs, 26. Ringworm, 294; skin diseases, 280. Other defects, 539. The report surveys the work carried on by various ameliorative agencies in the city. At present there is no organised system of care committees, although in several areas valuable work is being done by, for instance, the Women's Settlement, committees connected with certain schools, and the Children's Charities Fund of the National Union of Teachers. Dr. Auden urges the formation of school care committees, which would include the whole number of schools. This would render a school hygiene subcommittee of the education committee necessary, for to it belongs the ultimate responsibility. Not only would it help to remove much of the indifference and ignorance with which national education is so generally regarded, but the scheme would form of the various agencies at work an organic unity of personal service. For the treatment of ringworm, for which at least 600 children are excluded from school, the following methods are said to be possible: (1) The installation of an X ray apparatus by the education committee, to be used by the medical staff; (2) the appointment of an expert to work this installation; and (3) a contract with some person or persons to treat with their own installations such children as are suitable. There are at present 264 children on the register requiring continued observation by reason of symptoms suggestive of pulmonary tuberculosis. Some provision is required for those suffering from pulmonary tuberculosis to such an extent as to render it inadvisable or impossible for them to continue at school. At present there is practically no sanatorium accommodation for such children.

Infant Mortality.

The medical officer of health has printed an interesting report made to him by Dr. Jessie Duncan upon the subject of infant mortality in two of the poorest wards, St. George's and St. Stephen's. The children in this district are visited as soon as possible after birth, usually about the end of the first week. Directions are given as to the care of the child and information is obtained regarding the mother's employment, previous history, husband's wages, &c. Visits are then paid by health visitors every week for the first five weeks and every month afterwards. If the baby is found unsatisfactory the case is reported and may be taken over by Dr. Duncan. There is never any difficulty in visiting the homes. Taking the whole of the births registered in these wards and the deaths under one year of age, the infant mortality in 1910 was 140 in St. George's ward and 163 in St. Stephen's, as compared with 213 and 232 in 1904. In 1909, of 1285 mothers 728 were industrially employed before or after confinement in a factory or elsewhere. The mortality was highest (194) among the children whose mothers worked at a factory, and lowest (147) among those whose mothers worked at home, charing, washing, &c. Taking all employed mothers, the mortality rate among their infants was 179, or 10 above that of infants of mothers not employed industrially. On the whole, women who were employed had much smaller families than those who were not. This, however, does not apply to those who worked at home, for these had the largest families of all, the number being twice as large as in the case of women employed in factories. It would seem, therefore, that as a woman's family increases she is unable to work at a factory, but if necessary undertakes some industrial work at home. 69 per cent. of the mothers under 25 years old were employed industrially, against 54 per cent. of those aged 25 to 35, and 49 per cent. of those above 35. The breast-fed babies had much better health and a much lower mortality, whether the mother was employed or not. Employment only caused 6 per cent. difference in the number in good health, while feeding is shown to have caused a difference of 26 per cent. between the breast-fed and artificially-fed children. The general conclusions drawn are that it seems pretty certain that industrial employment has a bad effect on the infantile mortality, principally because it interferes with breast-feeding. For this reason employment in a factory is more harmful than employment at home. But the influence of employment is quite small when compared with the influence of acute poverty. In so far as the mother's employment reduces the acuteness of the poverty it may tend to improve the infant mortality. At any rate, it is doubtful whether any further interference with the employment of married women would be at all beneficial so long as the acute poverty remains.

Sir G. H. Kenrick on Hospital Reform.

At the annual meeting of the Hockley branch of the Provident Dispensary Sir George Kenrick said that two years ago he thought they were going to set an example of what might be done on a much larger scale. About that time a scheme for the reform of hospital out-patient departments was started. It was going to establish provident societies all over the city and prevent those great strings of people who flocked to out-patient departments. Many people were working at it, but it had not made the progress which Mr. Neville Chamberlain, its originator, had expected, but he (Sir George Kenrick) would not say that it had not progressed as well as he expected. The dispensary had founded provident branches at each of its centres, and the foundation was laid for a great change in the administration of hospital charities. He had reached the conclusion that what their society was doing was right, and that it could be made more far-reaching. If they could arrange that all the institutions in Birmingham devoted to the cure of sickness could be brought together and opened freely to the whole of the inhabitants of the city, and the whole of the medical men within the city could be so employed that their services would be properly remunerated, a vast step would have been made. Such a thing could be done. The first thing was contribution. He thought that 5*s.* would be a suitable contribution from each member. He did not think this would be a burden, and it would enable them to do almost everything required. When they found that the collections in the works of the city constituted one of the chief assets of the General and Queen's Hospitals and some of the other institutions, and that the General Dispensary received between £7000 and £8000 a year, and when they knew that societies like theirs as well as numerous medical clubs were all conducted on the same principle, after all it was a small step to suggest that everyone should contribute in the same way. Once they did that he was sure the authorities would place the resources of all the hospitals at the disposal of such a scheme. He would not exempt it from Government supervision. It would be simple to deduct such a small sum from wages. It would work out at 2*d.* in the £ and be applicable to all whose income was under £150 a year.

April 3rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Superintendentship of the Edinburgh Royal Infirmary.

THE managers of the Edinburgh Royal Infirmary received 32 applications for the post of superintendent of that institution. Six of the candidates are civilian members of the medical profession, while the majority belong to one or other of the Army, Navy, or Indian Medical Services. At a special meeting of the managers on April 3rd a short leet of six was formed consisting of the following: Lieutenant-Colonel Sir Joseph Fayrer, Bart., R.A.M.C., Hong-Kong; Major C. C. Fleming, D.S.O., R.A.M.C. (retired), Glasgow; Inspector-General T. D. Gimlette, C.B., Royal Naval Hospital, Haslar; Lieutenant-Colonel W. E. Jennings, I.M.S., London; Colonel A. Peterkin, A.M.S., London; Lieutenant-Colonel A. F. Russell, C.M.G., R.A.M.C., Malta. The final appointment will be made on April 6th.

Edinburgh University Degrees.

On March 31st, at the Spring Graduation Ceremonial, the Vice-Chancellor, Sir William Turner, conferred the degrees, chiefly in arts and science. Ten candidates received the M.B., Ch.B. degree. The honorary degree of LL.D. has been offered by the Senate to the following medical men: Sir William R. Gowers, Dr. T. S. Clouston, late physician-superintendent, Royal Asylum, Morningside, Edinburgh, and Dr. James Mackenzie, whose interesting Oliver-Sharpey lectures are now appearing in THE LANCET. Among non-medical scientific men to whom the degree is offered are Mr. Ernest Rutherford, F.R.S., Langworthy professor and director of the Physical Laboratories, University of Manchester, and Mr. Frank W. Dyson, the Astronomer-Royal.

Glasgow University and Western Infirmary Medical Residence.

The residence opened in October last at 9, University-avenue, Glasgow, has been quite successful, and the students have realised the advantages of seeing urgent medical and surgical cases at the Western Infirmary. The committee will open a second hostel at 20, Ruthven-street on April 10th. It is arranged in the same way as the first, but is lighted with electric light, and is almost equally near the Western Infirmary. If a sufficient number of students give in their names to Dr. J. Mill Renton, 1, Woodside-terrace, Glasgow, a third hostel will be opened on Oct. 10th. The charge for board and residence is 1 guinea a week.

Death of Dr. Keith Anderson, Arbroath.

On March 31st, at his residence, Arbroath, the death occurred of Dr. J. Keith Anderson, a much respected medical practitioner in the town. Dr. Anderson was a native of Arbroath and an M.D. of the University of Edinburgh. He had been nearly 40 years in private practice in Arbroath, and held the posts of medical officer of health of the burgh, of medical officer under the parish council, police surgeon, and certifying surgeon under the Factory and Workshops Acts. He was unmarried and was 65 years of age at his death.

April 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Housing in Dublin.

THE Public Health Committee of Dublin has issued a report which promises a more rigorous method of dealing with tenement houses than heretofore. The committee intends to have done, once and for all, with the patching of old houses and to insist on their thorough renovation. Property condemned as unfit for human habitation must be demolished forthwith. There has been great carelessness in this respect in the past. Within the past 12 months two houses condemned as unfit for human habitation collapsed, in each case with loss of life.

The Recent Outbreak of Typhus Fever at Arklow.

A serious outbreak of typhus fever having occurred at Arklow some weeks ago, the medical officer, Dr. P. J. Hamilton, found himself left unaided to cope with it. Attempts to engage an assistant medical officer having failed, he not only had to attend the sick, but personally to transport them to the fever hospital. In many cases he had to carry them from their beds to the ambulance, himself to drive the ambulance, and, finally, to carry them to their beds in the hospital. This went on for several weeks, Dr. Hamilton's life being, of course, in imminent danger all the time. It is pleasant to learn that the guardians of the union unanimously granted a bonus of £50 to recoup Dr. Hamilton for his loss of private practice during the continuance of the epidemic.

Irish Hospitals and English Nurses.

An attempt was made at a meeting of the Dublin corporation the other day to withdraw the city grant of £300 from the Cork-street Fever Hospital on account of the alleged refusal of the governors to appoint Irish nurses to their staff. The truth appears to be that, though, as is natural, the majority of the nurses are Irish, a few English nurses were recently appointed during a period of special strain. The attempt to withdraw the grant failed, but these repeated attacks on Irish hospitals for employing any other than Irish nurses cannot but do harm to Irish nurses earning their living in England, as so many of them do.

A New Babies' Club in Dublin.

The success of the existing babies' club in Dublin has encouraged the Women's National Health Association to found another. A meeting was held last week at the residence of the Lord Chancellor for this purpose. At the club mothers will be taught how to care for their babies, how to make baby clothes, and to prepare food. A nurse will be employed to visit the homes and supervise the work. It is hoped that the work may result in a lowering of infant mortality in the crowded houses and slums.

The New Inspector of Lunatics.

Dr. W. R. Dawson, whose appointment as Inspector of Lunatics was recently recorded, has been for some 12 years medical superintendent of the Farnham House private asylum. He has written much on subjects connected with insanity, and has translated Weichselbaum's "Pathological Histology" into English. He was employed a few years ago as investigator for the Dublin district for the Royal Commission on the Feeble-minded.

The Collection of the Census Papers.

Considerable surprise is felt that up to to-day (April 4th) in many parts of Belfast the census returns are not yet collected.

Bundoran and the Census.

Bundoran, one of the most beautiful seaside health resorts in the West of Ireland, had an influx of 600 visitors the last week-end who were the guests of the town's inhabitants. At present Bundoran is under the control of Ballyshannon rural district council, and the local complaint is that this council (through jealousy, it is said) will do nothing to improve it. So, in order to have the requisite population to bring the town under the Towns' Improvement Act, and that it may have a progressive council of its own, large numbers from Sligo, Omagh, Clones, Monaghan, Cavan, Belturbet, and Enniskillen were granted free railway travelling by the Great Northern Railway Company (who have a beautiful hotel at Bundoran) and spent the week-end when the census was taken in Bundoran. It is believed Bundoran has achieved its object. The above amusing episode illustrates the truth of the Irish proverb, "There's many a way of killing a dog besides choking him with butter."

April 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Cancer Statistics in France.

Dr. Jacques Bertillon, head of the Statistical Department of the Ville de Paris, has just published some interesting statistics regarding the frequency of cancer in France. From these it would appear that there exist in France a cancerous district, and one more highly favoured where cancer is three or four times less prevalent. The zone where its ravages are most numerous occupies the North of France, and its lower limit is marked on the map by a line uniting the towns of Caen, Angers, Dijon, and Mézières. This region corresponds almost exactly to the chalk bed of which Paris is the central point. Besides this important region, there are two smaller districts of cancer frequency in the departments of La Vendée and Isère. The favoured zone is the south-west of France, traced on the map by a line from La Rochelle to St. Etienne and from thence to the Rhone. Generally speaking, cancer is more common in towns than in the country, and shows an evident preference for the colder regions. On comparison of the statistics furnished by foreign countries, Dr. Bertillon states that northern lands show a much higher percentage (for 100,000 inhabitants, Netherlands, 101 deaths; Norway, 100; England, 91). In the centre of Europe the proportion falls (Austria, 78; France, 76; and Prussia, 71), and gradually diminishes as the Mediterranean basin is approached (Italy, 61; Spain, 48; Hungary, 42; Europeans in Algeria, 32). In all countries its frequency is on the increase. Dr. Bertillon notes especially a steady and considerable increase in cases of cancer of the digestive organs in France. For 100,000 inhabitants Dr. Bertillon

has collected the following figures during the last 25 years: Cancers of the stomach and liver, 41·5 deaths from 1886 to 1890; 41·8 from 1891 to 1895; 44·7 from 1901 to 1905; and 47·0 from 1906 to 1908. Cancers of the intestine, rectum, and peritoneum give for the same periods the following figures: 8·9, 9·9, 13·8, 15·0, and 15·0. Cancers of the buccal cavity have passed in the same lapse of time from 2·9 to 3·8. Cancers of the female genital organs show a slight decrease, from 24·0 to 20·6. Breast cancers remain stationary. In 1908 there were in France 30,124 deaths from cancer, and in 1909 in England 34,053.

Statistics of Diabetes.

Statistics are supplied by Dr. le Goff on the subject of diabetes, which disease is assuming alarming proportions in Paris. In 1880 there were registered 128 deaths from diabetes in Paris; in 1890, 304; in 1900, 427; in 1908, 464; and in 1909, 525. The number of deaths has thus quadrupled in 30 years. Dr. le Goff attributes this increase in mortality to the indisputable extension of the disease, and also to the fact that patients neglect themselves or are ill cared for. Alimentation is often little understood even by people of sufficient means. The fault is not so much one of overfeeding as of ill-combined and ill-adapted foods, insufficient mastication, and other causes that favour alimentary auto-intoxication. It is well known that diabetes recruits its victims principally among nervous subjects and brain-workers, persons in general whose occupations are sedentary, and who do not take sufficient physical exercise to utilise the products of a too rich diet. In Paris, as in other capitals, the members of liberal professions—i.e., brain-workers—are very numerous and constantly becoming more so. There is also another factor which Dr. le Goff omits to mention, but which is by no means to be neglected. The continual growth of the foreign or cosmopolitan population in Paris, consisting chiefly of people of means, adds a large contingent to the maladies of nutrition particularly among the Jews, whose susceptibility to diabetes has been remarked.

Penetration of Radium into the Tissues by Electrolysis.

Researches on the applications of radium are pursued here with great activity, particularly in the treatment of arthropathies and neoplasms. At present experiments are being made on the penetration of radium into the economy by electrolysis by means of the continuous current. M. Béclère, head of the radiology service at the Hôpital St. Antoine, a service extremely well organised and largely followed, has succeeded, in association with M. Baret and after numerous experiments, in passing the radium ion developed from radium bromide through the skin, maintaining it absolutely intact, and in localising the metal in the subjacent tissues, aponeuroses, muscles, periosteum, and bone, to a depth of at least 9 centimetres, at which point the radium accumulates to a notable degree, lasting for at least 15 days. M. Baret has treated nine neoplasms in this manner. A young woman, 27 years of age, with a voluminous sarcoma of the scapula, was completely cured after 15 repetitions of the electrolysis lasting over a period of five months. M. Fabre and M. Zimmermann have arrived at the same result by passing the continuous current through a layer of radiferous mud applied on the skin. They have satisfied themselves that the penetration of the radium through the tissues is incontestable. They apply this treatment chiefly to gland disturbances and arthropathies.

Medical Posts Reserved for Women.

The medical societies are protesting vehemently against a decision of the Assistance Publique reserving posts as house doctors to be competed for by women medical students at the Women's Hospital at Vésinet. This decision they consider offers a dangerous precedent. At the Society of the Seventh Arrondissement a vote has been taken inviting the President, Dr. Brindeau, to represent to the Assistance Publique the desirability of withdrawing this decision. In a discussion held in this society several medical men manifested apprehension that this might be only the beginning of a new state of things and of very serious changes, in which the posts of internes in other hospitals might be exclusively reserved for women students. The female wards represent exactly half of the hospital services. Already at the Hôpital de la Maternité special posts have been created for the women students. The Medical Society of the Sixth Arrondissement and the Corporative Association of Medical Students also protest. They point out that the question of sex has never counted among the students, and that men's wards have always been equally open to students of both sexes. It will be a flagrant injustice if women retain the right of occupying posts in male wards and in addition have the exclusive right of service in women's wards. Dr. le Bée proposes that physicians and surgeons called as members of the jury in competitions for posts reserved exclusively for women students should refuse to act.

Death of Professor Arloing.

One of the most remarkable scientists of the French Veterinary School, Professor Arloing, directeur de l'École Vétérinaire de Lyon, correspondant de l'Institut et de l'Académie de Médecine, died suddenly on March 20th at the age of 59. His literary work was considerable and bore chiefly on the subject of the tuberculosis bacillus. He has studied different varieties of bacilli with keen and patient investigation, especially the bacillus of bovine tuberculosis. With this bacillus he succeeded in preparing a vaccine, which has been tested during the last three years in the veterinary schools and has given remarkable results. Modest and laborious, his whole life was devoted to laboratory work, and his rare communications were the outcome of long and profound study. He was the faithful collaborator of another *savant*, happily still left to us, Professor Chauveau, Inspector-General of Veterinary Schools, who has joined his name to that of Professor Arloing in the greater part of his labours during the last 12 years.

Bequest to the University of Paris.

The announcement was made on March 27th by the council of the University of Paris that the munificent sum of £100,000 had been bequeathed to the University by the late M. Loutreuil,[1] with the stipulation that the provincial universities should participate in the income derived therefrom. The income is to be devoted to laboratory equipment, libraries, additional science lectureships and the general encouragement of scientific studies, and its distribution will be determined by a committee consisting of the vice-rector of the Sorbonne with a representative from the Faculty of Science of each provincial university.

April 3rd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Influence of Old Age upon the Type of Illness.

IN a paper read before the Vienna Medical Society Professor H. Schlesinger discussed the changes produced by old age influencing the course and type of diseases. He said that in elderly persons many diseases presented symptoms differing materially from those which were met with in young people. The reason was mostly the arterio-sclerotic changes so frequent at the present day, with the concomitant affections of the heart and the exhaustion, so to say, of the vaso-motor centres of the medulla oblongata; the protective and preventive apparatus of the organism was also somewhat altered. There were very often differences between the axillary and the rectal temperature of old people. The so-called asthenic type of senile disease was often accompanied by pyrexia, but this could be found only by rectal thermometry. The difference might be as much as from 1° to 3° C., which, however, did not permit any prognostic conclusions, as in younger patients. The examination of the senile thorax gave results quite different from those obtained in adolescence because the vibrations of the ossified or calcified thorax were of a distinct type. The lungs tended to become atrophic and the respiration was more superficial, thus producing special physical conditions, with changes of the percussion note and the sensation of resistance. In senile tuberculosis extensive anatomical lesions might give rise to comparatively mild clinical symptoms, only some râles and a slight manifestation of consolidation being often present in cases of serious disease. Hæmoptysis was not more frequent than in young patients. The pneumonia of old age was often of an ambulatory type. Apoplectic attacks might occur in which there was no other anatomical change than œdema of the brain; meningeal

[1] THE LANCET, March 11th, 1911, p. 702.

irritation might last for weeks. Disease of the alimentary canal was often disguised under the form of chronic gastro-enteritis. The ordinary prognostic and diagnostic aids were therefore not to be depended on in the treatment of elderly patients and must be supplemented by the consideration of the special features of each case.

Health of Vienna.

The winter, which may now have come to an end, will be long remembered by the population of Vienna on account of its bad influence upon the general health. Not only was the weather very damp and therefore unhealthy on account of the small amount of sunshine, but there was also an extensive prevalence of influenza and the exanthematous diseases. At times more than 12,000 persons were treated within one week in our hospitals as in-patients, and the mortality was also high. The general yearly death-rate averages about 16·5 per 1000, but this winter it went up to 21 per 1000. The increase was due mostly to respiratory trouble caused by influenza. As an illustration it may be mentioned that the average weekly number of hospital inmates in winter time is 9600, with about 300 deaths, but during the most favourable week from last November to March the number of in-patients was 10,800 with 371 deaths. There were altogether 2 cases of small-pox and 7 cases of cerebro-spinal meningitis, whilst scarlet fever (106 cases per week), measles (200 cases per week), and diphtheria (68 cases per week) were not more frequent than was to be expected during an unhealthy season. The small number of cases of small-pox is always a source of much discussion between the friends and enemies of vaccination, the arguments employed by the latter being of the usual fallacious description.

Arterio-sclerosis in Medical Practitioners.

At a recent meeting of the Gesellschaft der Aerzte in Vienna Dr. Herz read an interesting paper on Arterio-sclerosis in which he directed attention chiefly to the disease as it occurred in medical practitioners. He said that it was well known that the percentage of medical men who suffered from this disease was relatively very high—so much so, indeed, that it has become a "phoby" among certain members of the profession. As a rule, however, its course has undergone changes similar to those observed in the case of other diseases such as tabes and general paralysis of the insane. It was now recognised much earlier than formerly, and the attacks of angina pectoris, with their rapid development of tragic results, have given way to a slowly progressive and insidious cardio-renal arterio-sclerosis. Steno-cardiac attacks were therefore much more frequent, and harassed the patient for many years. Dr. Herz has distributed amongst practitioners in Austria a paper of questions asking for data concerning the supposed etiological factors of all cases of arterio-sclerosis, and it was remarkable how often the answers have attributed the disease to over-exertion, both mental and bodily. In each of these cases the circulation of the coronary system was chiefly affected. He believed that civilised mankind was working constantly under conditions of intense strain, with high blood pressure as one of the consequences, and that medical men, in addition to that source of disability, were also subjected to mental overstrain due partly to the responsibility of their calling and partly to the arousing of their sympathies. The best means for the relaxation of the high blood pressure, apart from the physical methods, must be looked for in the inducement of pleasant sensations and the avoidance of mental fatigue.

April 3rd.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Overcrowding of Bellevue Hospital.

DURING the month of February Bellevue Hospital was greatly overcrowded and still remains so. At times many of the wards were filled with patients placed on spring mattresses seven or eight inches above the floor. There are in Bellevue about 1230 beds. On March 1st there were 1296 indoor patients, on the 2nd there were 1330, and on the 3rd 1304. The remedy for this state of affairs is hard to find. By the terms of its charter Bellevue is forbidden to turn patients away, but as the other charity hospitals are also full to overflowing it is difficult to see what else can be done.

Improvements in New York Hospitals.

A new building for gynæcological cases, an annexe to the Sloane Hospital for Women attached to Columbia University, was formally opened on March 1st, the present name of the institution being conferred, to replace its former designation, "Sloane Maternity Hospital." A new pavilion, seven storeys in height and 206 ft. in length, which is being added at a cost of £55,000 to the Willard Parker Hospital, will be reserved for cases of measles. The Willard Parker cares only for contagious diseases. The German Hospital will henceforward give clinical instruction to medical students from Columbia University. During the past year gifts and bequests to the amount of £13,554 have been received, in addition to a special donation of £20,000, to found a children's ward therein.

Legal Control of Venereal Diseases.

The American Society of Sanitary and Moral Prophylaxis, at a meeting held in the New York Academy of Medicine, has urged that gonorrhœa and syphilis be made "reportable" diseases, as tuberculosis and the exanthemata are now, in order that sufferers might be isolated if necessary. It also advocated the wide circulation of educational literature in the form of pamphlets. Recently several of the popular and low-priced magazines have published most outspoken articles on this subject, and the names syphilis and gonorrhœa have seen the light for almost the first time outside of professional journals. Gonorrhœa in particular demands attention, now that gynæcologists realise that it is the cause of a great part of the pelvic diseases of women, if not of the sterility generally attributed to advancing civilisation.

More Raids on Opium.

Twelve pedlars of opium were picked up by the police on the evening of March 4th in and about the New York slum known as Chinatown; they were selling the drug in walnut-shells. Another method discovered by the police is to place a quantity of the extract used for smoking in a bun, which is sold in certain low-class restaurants to those who know the secret name of this poorly-nourishing "sandwich." In addition to paying the penalty for violating a city ordinance, these pedlars will probably be haled before the Federal authorities for complicity in smuggling.

Free Dental Infirmary in Boston.

The Forsyth Dental Infirmary, to be erected in Boston, will be in a building of three storeys and two mezzanine floors. It will furnish free expert advice and care for their teeth to all deserving children under the age of 16 years. No provision is to be made for artificial work, as the children's problem has little to do therewith. It is hoped that it will prove not merely a place of relief for individuals but a centre of research, a means of training in dentistry, and of public education in dental and oral hygiene for future generations.

Plague Spread by Milk.

Dr. Theobald Smith, Professor of Comparative Pathology at Harvard Medical School, recently stated that in his opinion plague might be spread by the medium of infected milk. Dr. Smith said that if men handling milk in the Western States were infected with plague there would be grave danger of the milk transported to the Eastern States becoming infected, with the result that the disease might become widespread.

Cost of a "Cold in the Head."

The Chamber of Commerce in Boston has been investigating the subjects of coryza and rhinitis, and has come to the conclusion that each "cold" costs the community about £9 in loss of wages, doctors' bills, and the economic loss to the community.

Diphtheria at Johns Hopkins Hospital.

The outbreak of diphtheria at Johns Hopkins Hospital at Baltimore referred to in a recent communication now embraces 73 cases in that institution and throughout the city. The near-by fashionable suburb of Roland Park is under strict quarantine, and four other hospitals are closed to the public save for emergency cases. How the disease obtained such a hold in a scientific institution is still a mystery.

Rhode Island Tuberculosis Commission.

The conclusions arrived at by this body, after one year's

careful study and investigation, are: (1) That segregation, especially of advanced cases, is the logical measure for prevention; (2) that the State and municipalities should jointly care for cases that cannot be helped at home, and that the State should subsidise local institutions to the extent of £1 5s. a week for each non-paying patient; (3) that provision should be made for proper instruction about tuberculosis to all consumptives, their families, and to children in the public schools. The 1000 annual deaths from tuberculosis in the tiny State of Rhode Island are estimated to entail an economic loss of over £1,674,750.

Raising the Standard of Medical Education in New Jersey.

A Bill designed to raise the standard of requirements for medical licences in that State has been introduced into the New Jersey State Legislature. The Bill provides for the appointment by the Governor of a board of examiners, to consist of nine regularly licensed physicians, to which applicants for licences to practise medicine shall submit satisfactory evidence of both preliminary and medical education. The Bill fixes the requirement for preliminary education at four years of high school course or its equivalent, but provides that in July, 1915, the requirement shall be raised each year until in July, 1918, four years of academic work shall be required. A candidate then must hold, in addition to his M.D., either a B.Sc. or a B.A. degree.

Disease in Wall Paper.

The board of health of Bayonne, N.J., a suburb of New York, has adopted a resolution forbidding the pasting of new wall-paper over old; the latter must be thoroughly scraped off first, as it forms an excellent harbour for pathological bacteria.

The Pushing Opticians.

Opticians, having succeeded in securing in many of the States legislation allowing them to test eyes and fit glasses, as well as to assume the special title of "optometrists," are forgetting their promise not to meddle with pathological conditions. In many of the recent State examinations questions have been given in the anatomy, physiology, and pathology of the eye, with the obvious intention of enabling these "refractionists" to pose as medical specialists.

Plague on the Pacific Coast.

A mysterious disease from which three persons have died in Spokane, Wash., since January has been pronounced by the State Medical Board to be bubonic plague. At present there are 15 victims of the disease. A heap of decaying vegetables found in the cellar of one of the victims is being subjected to careful examination.

March 24th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

The Employment of European Nurses in Native Wards.

IT is a vexed question in South Africa whether white nurses should be compelled to nurse native male patients in hospital. The arguments used by many are that the dealing with such patients, first, is repulsive to the nurse herself, and, secondly, tends to lower the status of European women generally in the eyes of natives. The first is true enough, undoubtedly, especially in the case of most colonial-born nurses. The second is partly true also, as the raw native, at any rate, cannot understand or appreciate a white woman ministering to his wants; nevertheless, one rarely hears of a nurse being insulted or molested. If white nurses could be replaced satisfactorily in the native wards by suitable native women one would advocate their replacement without hesitation, though it would complicate the general administration of hospitals considerably owing to the necessity of providing separate accommodation and messing arrangements for the native nurses. At the purely native hospital at Lovedale native probationers are employed under a European matron, but they are stated to compare very unfavourably with European probationers. Considerable difficulty already is experienced by the authorities of that hospital in finding employment for their nurses when they leave, and as a result it is stated that several of these women have already given up seeking employment and have returned to the kraals of their people. Eventually there may be some future for native nurses if the mines can be induced to give them a trial in the compound hospitals, but at present it does not appear probable that they will ever be employed generally in the ordinary hospitals of the country. Accepting the position, for the present at any rate, that the services of white nurses must continue to be utilised in native wards, it would seem to be desirable that their work in these wards should be mainly that of supervision, leaving the dealing with the male patients as far as practicable to orderlies.

The Orange River Colony Medical and Pharmacy Board.

The Medical and Pharmacy Board of the Orange River Colony has recently been dealt with by the Minister for the Interior in a manner that has caused a great deal of irritation in professional circles, not only in the State itself, but throughout the Union. The State Medical Ordinance, as amended by an Act passed after the advent of responsible government in that colony, provides that diplomas from examining bodies in countries not reciprocating with the United Kingdom are not registrable in the Orange River Colony, except in the case of *bonâ-fide* students from South Africa, at schools where the curriculum and standard of examination are on an approved basis. The statute does not specify any particular diploma as entitling the holder to registration, but it is clear that, as the law stands, no diploma can be registered at all unless it constitutes a qualification to practise in the country of origin. Foreign students are given every facility for admission to and study at the medical schools of the German Empire, but after passing a qualifying examination such students are not entitled to practise their profession in Germany unless they take out papers of naturalisation. The German Staats-Examen, therefore, passed by a South African student, suffices for all purely professional requirements for registration in the Orange River Colony, but nevertheless such students cannot lawfully be registered, as they would not be permitted for the reason already stated to practise in Germany. In the middle of last year two such students applied for registration, and the Board had no alternative but to refuse the applications. On August 19th last the Hon. General Hertzog, the Minister for Justice, while on an electioneering tour at Smithfield was reported in the *Free State Friend* to have used the following words in addressing a public meeting: "You have probably heard about the unworthy attitude of the Medical Council against two young doctors born in South Africa, who have studied in Germany. The attitude of that council is another instance of the way the Jingoes are trying to do the Dutch down. In conclusion, one more instance of the unscrupulous methods of our opponents." The Board, in common with the medical councils and pharmacy boards of the other provinces, is administered by the Department of the Interior, one of the several portfolios held by the Hon. General Smuts. The remarks of the Minister for Justice were considered in due course by the Board, and a dignified resolution was passed directing the attention of the Minister for the Interior to the statements of his colleague, and requesting him either to cause General Hertzog to withdraw his accusation, or, as the Minister responsible for the conduct of affairs by the Board, to endorse his colleague's views by calling upon the members of the Board to resign. After some preliminary correspondence, the Board was informed that General Smuts did not see that any useful object would be attained by pressing the matter, and that the Board would do well to let it drop. This, however, the Board felt it could not do, and at its next meeting passed the following resolution, which, it was expected, would bring the matter within the purview of the Cabinet, namely:—

> The Council are of the opinion that the charges, reported to have been made by the Hon. the Minister for Justice in his speech at Smithfield, have neither been substantiated nor withdrawn by him to the satisfaction of the Council. The Council therefore request that the whole matter, with the correspondence, be laid before the Governor-General in Council in order that they may be proved worthy or unworthy to perform the duties assigned to them.

This resolution also was forwarded to the Department of the Interior. In reply the Board was informed that General Smuts was of the opinion that the course proposed was an unconstitutional one, and that he had nothing to add to what he had already stated in his former communication. The medical members of the Board, with one exception, the dental member, and the representatives of the chemists thereupon resigned, and at the present moment there is no

Board in the Free State to perform the duties appertaining to a Medical or Pharmaceutical Council. One cannot help thinking that the Board would have been acting more in the interests of the profession if, on first ascertaining that General Smuts felt that he could not deal with his colleague as desired by the Board, it had addressed General Hertzog directly, as the latter then, without loss of dignity or prestige, would have been afforded an opportunity of withdrawing the accusation on ascertaining the facts. At the same time it is felt that General Smuts has not treated the Board with much consideration.

Public Health Bill.

A proposed Bill to amend the Public Health Acts of the different provinces of the Union has just been published. It is not being enthusiastically received by the profession, and appears to do anything but foreshadow improvement in public health administration. It abolishes all the statutory offices of medical officers of health of the different provinces and the Health Board of Natal, and provides for the absorption of all their functions by the Minister for the Interior. It is true that provision is made for the appointment of a medical officer for the Union and of assistant medical officers, but these officers apparently are to have purely advisory duties unless the Minister assigns to them other duties or functions. The Bill does not provide for the establishment of a Department of Public Health, and even the assistant medical officers need not necessarily be the subordinates of the medical officer. Generally it appears to be a badly thought-out measure, and it would seem as if the Government did not intend to carry out the promise given in Parliament by General Smuts on Dec. 13th last. Meetings of the different medical societies are being called to consider the proposals, and it is safe to predict that they will not be permitted to become law without opposition from the profession.

March 20th.

Obituary.

JEFFERY ALLEN MARSTON, C.B., M.D. ST. AND., M.R.C.P. LOND., F.R.C.S. ENG.,

SURGEON-GENERAL (RETIRED); HONORARY SURGEON TO THE KING.

IT is with deep regret that we record the death, at the age of 79, of Surgeon-General Jeffery Allen Marston, C.B., honorary surgeon to H.M. the King, which took place at his London residence, 56, Nevern-square, S.W., on March 31st. Surgeon-General Marston, who was the son of the late Mr. Thomas Marston of Martham, Norfolk, was born on Dec. 2nd, 1831.

The deceased officer was educated at home, at the University of Glasgow, and partly in Newcastle and London, and in 1854 qualified as L.S.A. and M.R.C.S. Eng., taking also the M.D. degree of the University of St. Andrews. Many years later he took the Membership of the Royal College of Physicians of London, while in 1888 he was elected a Fellow of the Royal College of Surgeons of England. He entered the army as acting assistant surgeon on Nov. 10th, 1854, and was appointed assistant surgeon on Dec. 2nd. From this time forward for the next 35 years he did admirable service as an army medical officer, filling with distinction many important appointments. By 1873, at the beginning of which year he was promoted to the rank of surgeon-major, his work had attracted the favourable attention of the authorities. While employed at headquarters he laid down the scheme and superintended all the details connected with the fitting up of the *Victor Emmanuel* hospital ship for service with the expedition to Ashanti with most satisfactory results. In 1877, as medical member of a committee appointed by the Secretary of State for War, he drew up the dietary for military prisons which remained in general use for many years. In December of that year he was appointed secretary to the Principal Medical Officer of the British Forces in India, in which capacity he had to prepare the schedule of field hospital organisation which proved so successful in the Afghan wars. His work in this department was universally allowed to have been far-seeing and wise. He was also a member of the committee appointed to consider the steps to be taken for the withdrawal of the troops from Afghanistan after the treaty of Gundamak, in consequence of cholera having made its appearance on the Cabul-Khyber route. Here his familiarity not only with epidemiological history but with clinical manifestations made his opinion very valuable to his colleagues. For these services he was favourably mentioned in general orders and was made an honorary surgeon to the Viceroy of India.

In 1882 he was appointed sanitary officer to the Egyptian expedition, was present at the battle of Tel-el-Kebir, and was promoted to the rank of deputy-surgeon-general, receiving the Military Companionship of the Bath, the medal with clasp, and the Order of the Osmanieh (third class). He subsequently held the appointment of head of the Statistical and Sanitary Branches at the Army Medical Board, being by this time recognised by the War Office as well as by his own branch of the service as a real and tried authority upon all the matters coming before such a board. For Marston was always a remarkably well-equipped man, theoretically as well as practically. A very wide reader, he was perfectly willing to test his personal experience by the experience of others, and was consequently able to form sound but flexible judgments—to make allowances as well as draw up schemes. The way in which during official life he kept in touch with scientific medicine was well illustrated when in 1887, at a very short notice, he delivered the lectures on military hygiene to the probationers and medical officers at the Army Medical School at Netley during the illness of Professor De Chaumont. It was this same wide range of practical and academic knowledge which led in the autumn of 1887 to his being sent by the War Office as a British army medical delegate to the Ninth International Medical Congress held at Washington. His report of the proceedings at that Congress was published as an official document by the Government and thoroughly deserved the notice which it secured. In 1888 he went to Egypt as Principal Medical Officer of the British forces serving there, when his organising powers and capacity for looking ahead and dealing with many men and large things in a sympathetic spirit were put to the test, as it fell to him to make the medical arrangements connected with the contingent sent to Suakin under Sir F. Grenfell. On his promotion to the rank of surgeon-general in 1889 he was transferred to Gibraltar, whence he returned to retire from the service, when he became President of the Army Sanitary Committee, as well as a member of the Indian Medical Board. He was also a member of an Irish Educational Commission.

This is a brief record of the important work which Marston did, but sufficient has been said to show how all-round that work was and how thorough. In particular, his report to the War Office upon the proceedings of the Ninth International Medical Congress at Washington was a most valuable document. He selected practical points to bring before his department, being helped in their choice by his hard and varied experiences of actual service. It is in this report that he insisted upon the value of opium in cases where, from over-fatigue, indifferent food, and irregular or insufficient sleep, the men show signs of depression, loss of appetite, and want of energy. In such cases, at least if the strain is likely to be only temporary, Marston stated that he had found small doses of opium to be most valuable, "it economises the fuel," he said, "and eases, as it were, the animal machine at a time when its energies have to be obtained from molecular disintegration—a destructive metabolism of its own tissues instead of that of the fuel put into it." The view was debated, but the testimony in its favour from those who had been upon armed expeditions was strong. In the section of materia medica and therapeutics at this congress Marston called attention to the great importance, especially on field service, of reducing the number and bulk of the remedies employed, and testified in the early days of compressed drugs to the value of what could be effected by the introduction of the more active preparations in the form of tabloids and triturates, the risk of adulteration on the part of the manufacturers being, of course, guarded against. His suggestions, again, for the modification of the medical and surgical equipment for the field received the careful consideration of our own authorities, economy of transport being the main thing that is always demanded in war of its medical department. Marston also took this opportunity, as he did many others in our columns, of urging the necessity of considering physical qualities in choosing our army officers. In his remarks on competitive examinations for admission into the army he made the practical suggestion that physical qualities

"should count for something in a youth seeking to become a soldier, against another possessed of first-rate receptive faculties that have been 'crammed' with information, but who, in physique and physical activity, may be manifestly inferior to the first." There is still a strong feeling that physical qualities have been underestimated in the regulations for the candidates for military commissions, though of late more importance has been attached to the quality of the case in which the educational qualifications have been packed. Marston was aware of this change, also of the different quality of the competition for commissions now existing, and the different circumstances under which much work in the service has to be carried out; his attitude had lately become modified on these matters accordingly, but mainly because his favourite anticipation for this empire was an Imperial Defence Service in which there would be room in different sections of the service for all good qualifications, physical as well as mental and moral.

Our personal relations at THE LANCET with Surgeon-General Marston were of the closest possible kind. For 30 years, whenever his conditions of employment allowed, he was a regular member of the staff of THE LANCET, and although during the last decade of his life he had ceased to give us so much help, we have been until the very week of his death in the habit of submitting for his opinion subjects where we knew that his great experience and knowledge of life and human nature would provide us with sound advice. As is generally known, there was a period when the conduct of this journal was largely in the hands of Sir John Tweedy, Surgeon-General Marston, and the late Dr. J. G. Glover, and the debt which the proprietors then felt that they owed to these gentlemen still remains unpaid. Marston during his period of practical journalism was found by all his colleagues to be a combination of good nature, wide reading, and shrewd criticism. He had a great sense of the dignity of the medical profession, but at the same time considerable contempt for a too narrow professional spirit. This was particularly well shown in the way he adapted his wide general reading to professional questions, and led occasionally to a frankness of diction in our columns which did not always please our public. But his simple directness delighted those with whom he came into personal contact, for it was accompanied with so much courtesy of manner and so much willingness to be convinced by any arguments on the other side.

Surgeon-General Marston married Annie, daughter of Mr. C. Webb of Hoddesdon, Herts. He had by her two sons and two daughters, but his happy family life was marred by sad bereavements. His elder daughter, the wife of Colonel Dalrymple, C.B., died in child-birth. Both sons, who were in the Royal Artillery, predeceased him; the elder, Major Charles Marston, died from hepatic abscess contracted in India, the younger was drowned a few weeks after obtaining his commission. Marston bore these blows with a resignation which those who knew him felt to be the result of the greatest personal courage; a deeply affectionate man, his sense of loss was always present to him. To his widow, his surviving daughter, and his grandchildren we offer our sympathies in the loss which they have sustained and our assurance that their sense of grief is shared closely by many others. At the very quiet funeral ceremony held on Tuesday at Charlton, Mrs. Sprott, Surgeon-General Marston's surviving daughter, and her husband were the chief mourners, while the following officers of the Army Medical Service (all retired), Surgeon-General T. Maunsell, C.B., Colonel McNalty, C.B., Colonel A. F. S. Clarke, and Colonel S. K. Ray, were also present, Mr. E. Webb (cousin), and Mr. S. A. Vasey representing THE LANCET.

HENRY PICKERING BOWDITCH, M.D. HARV., D.SC. CANTAB., LL.D. EDIN.

THE death of Professor Bowditch removes the *doyen*, and in reality the founder, of the American School of Physiologists. Neither Draper, Dalton, nor Austin Flint, jun., though able and industrious workers, founded a school—the conditions were not favourable; but in the "seventies," with the return of Henry Bowditch from Ludwig's laboratory, and the opening of the Biological Laboratory at the Johns Hopkins University under Newell Martin, physiology began to attract research students, and within 20 years the American school had become firmly established, and its work shows to-day indications of this dual origin of a cross between the physico-chemical school of Ludwig and the biological school of Huxley.

Professor Osler has kindly sent us the following note upon Professor Bowditch's life and position:—"Of distinguished New England stock, a grandson of the famous mathematician whose nautical almanac and logarithm tables were (perhaps still are) in use in the British and American navies, and a nephew of the well-known authority on diseases of the chest, young Bowditch graduated in 1861 at Harvard. In the same year he volunteered for service in the Massachusetts cavalry and served through the Civil War, resigning as major in 1865. He then entered the Harvard Medical School and after graduation decided to devote himself to the study of physiology. For a time he worked with Claude Bernard, for whose genius and memory he retained a profound reverence. But the man whose influence remained dominant throughout life was Ludwig, with whom he became intimately associated, and in whose laboratory he worked out several important problems. He remained long enough in Leipzig to get a thorough grasp of the science of experimental physiology and to acquire a large measure of the spirit of a great master. A deep friendship grew up between the men, and in 1884, on the occasion of a visit, Ludwig spoke to me with warm affection of his English and American pupils, and especially of Bowditch, whose mind, I remember, he said, was specially adapted to cope with problems in physiology, having both breadth of view and a power of concentration on detail. Returning to Boston in 1871 Bowditch became assistant professor of physiolgy and five years later full professor. It is not too much to say that the present splendid position of the Harvard Medical School is due to him, as dean, more than to any other one man. President Eliot started the reforms, but Bowditch was the active promoter. It was a long up-hill fight, and the new buildings, opened in 1883, marked a great line of advance in medical education in America. His own laboratory became the centre for advanced instruction and research, and in it, and in that of Newell Martin at Baltimore, a majority of the present active school of physiologists of the United States was trained. With the growth of the school came the need for additional laboratories, and it has not often happened in the experience of a teacher twice to see the fulfilment of his dreams. When the present palatial buildings of the school were opened a few years ago everyone felt that it was a worthy tribute to a man who had devoted a lifetime to the service of the best interests of the profession. But it was more than this: it was in reality a tribute to the splendid group of physicians who had served the public for so many generations—the Warrens, the Jacksons, the Bigelows, the Shattucks, the Holmes, and others who have made Boston a city of medical Brahmins.

"Like many other members of his family Dr. Bowditch was a public-spirited man, taking a keen interest in school hygiene, in social science, and in the great Boston public library, of which he was a trustee. For years he was the moving spirit in the American Physiological Society. Few men of his generation have done better work; and there was in it a something not to be estimated by any category of his writings or his achievements as an educator or reformer—a quality not easily definable, but which we all recognise, though the gift of only a few choice spirits, that subtle quality of the little leaven 'that leaveneth the whole lump.'"

Professor Bowditch, who was the recipient of numerous academic honours, died at his house, Jamaica Plain, Boston, aged 71.

JOHN HENRY FARBSTEIN, M.B., B.S. LOND., F.R.C.S. ENG., L.R.C.P. LOND.

THE regrettable death of Mr. J. H. Farbstein at his home in Hull on March 23rd, at the early age of 26, cuts short a most promising career. Mr. Farbstein received his professional education at University College Hospital, London, taking the Conjoint Diploma of the Royal Colleges in 1907, and a few months later the M.B. and B.S., with honours in surgery, of the University of London. He took the Fellowship of the Royal College of Surgeons in 1910. He had served as house physician and house surgeon and as assistant in the ear and throat department at University College Hospital, and also as clinical assistant at the Great Ormond-street Hospital for Children. At the time of his death he was resident medical officer to Hull workhouse infirmary, where he enjoyed the esteem of all with whom he came into contact—staff, nurses, and patients.

Medical News.

QUEEN'S UNIVERSITY OF BELFAST.—At examinations held recently the following candidates were successful:—

FIRST MEDICAL EXAMINATION.

Chemistry.—W. L. Agnew, J. B. Alexander, G. B. Calvert, Patrick Clarke, David Corry, John Cullenan, Charles F. Davey, T. W. E. Elliott, Lizzie Finnegan, Mary A. Gallagher, Andrew Gaston, Mary E. Henry, S. J. Hutchinson, Patrick Kane, R. G. M'Elney, J. W. M'Kee, T. B. M'Kee, J. C. M'Millan, Sylvia Marsh, J. F. Meenan, A. J. Millar, Thomas Milling, J. B. Minford, F. P. Montgomery, W. N. Montgomery, Herbert Moore, J. J. Murray, Abraham Porter, William Russell, J. P. Smyth, A. C. Taggart, W. A. Thompson, Elizabeth S. Walker, R. F. Walker, D. R. Watterson, N. W. F. Wheeler, and T. K. Wheeler.

Physics.—W. L. Agnew, J. B. Alexander, G. B. Calvert, Patrick Clarke, David Corry, Chas. F. Davey, John Dunlop, Lizzie Finnegan, Mary A. Gallagher, Andrew Gaston, W. J. Harvey, S. J. Hutchinson, Patrick Kane, John J. Kerr, Robert G. M'Elney, J. C. M'Millan, J. F. Meenan, Thomas Milling, F. P. Montgomery, Abraham Porter, Joseph P. Smyth, W. A. Thompson, Lancelot Tweedie, and T. K. Wheeler.

Zoology.—Louis Jefferson, John J. Kerr, A. J. Millar, James N. Smith, J. J. Walker, John G. Wilson, Francis N. Woods, and Robert Woodside.

Botany.—C. F. Davey, S. J. W. Donald, George Gordon, Charles C. Humphries, Louis Jefferson, J. J. Kerr, J. R. M. Mackenzie, R. J. Maguire, William Russell, Francis R. Sinclair, James N. Smith, and Robert F. Walker.

SECOND MEDICAL EXAMINATION.

Anatomy and Physiology.—N. Beattie (honours, special prize), E. C. Emerson (honours), William Gault, H. P. Hall, H. M. Jackson, Wm. S. Lynd, Wm. M'K. H. M'Cullagh, Vincent Magee, and V. C. Montgomery.

Anatomy.—T. M. Adamson, F. L. Cleland, Samuel M'Comb, R. U. M'William, S. E. Picken, and H. R. Sinclair.

Physiology.—E. W. Mann, A. G. Mitchell, R. S. Ross, and Martha J. M. Stewart.

THIRD MEDICAL EXAMINATION (*New Regulations*).

Pathology, Medical Jurisprudence, and Hygiene.—William F. Algeo, John H. Beverland (honours, recommended for prize), Sarah E. Calwell, Frederick Carson, Samuel H. Davison, Samuel R. Foster (honours), Cecil L. Gaussen, John M'I. Gibson, Norman B. Graham (honours), Norman C. Graham (honours), *John V. Holmes, James T. Kyle, Homer H. C. Lynch, James Lyons, John M'Fadden, Michael M'Ging, Edward M'Sorley, Ivan W. M'Gill, Robert Marshall (honours), *Henry H. Mulholland, William Tyrrell, and William M'N. Walker.

* Passed also in Materia Medica.

Medical Jurisprudence and Hygiene.—Samuel Acheson, William W. Allison, and Hugh A. Skillen.

Materia Medica, Medical Jurisprudence, and Hygiene.—Joseph Porter.

Pathology and Medical Jurisprudence.—Adiel E. H. Reid.

Pathology and Materia Medica.—Llewellyn D. I. Graham, Harold V. Walsh, and James R. White.

Medical Jurisprudence.—James Hill and Edgar Morison.

Pathology.—Joseph Patrick, William Wilson, and Samuel I. Turkington.

THIRD MEDICAL EXAMINATION (*Old Regulations*).

Materia Medica and Physiology.—Edward W. Mann.

M.B. DEGREE EXAMINATION.

Samuel Campbell, Philip J. Gaffikin, George S. Glass, William S. Haydock, Robert J. M'Feeters, John P. J. M'Givern, Ulick J. G. Mulligan, Wm. Paul (second-class honours), and Alfred H. Rentoul.

Medical Jurisprudence and Hygiene.—James Park.

D.P.H. EXAMINATION.

George F. Campbell, John E. Clements, John Dodd, and James M'Gill.

UNIVERSITY OF DURHAM.—At a Convocation held on April 1st the following Degrees and Diplomas were conferred:—

Doctor of Medicine.—George Denholm, Helen Mary Gurney, Thomas Charles Hunter, and Arthur Cecil Hays McCullagh.

Doctor of Medicine for Practitioners of 15 Years' Standing.—Patrick Barragry, George Bryce, John Joseph Fitzgerald, Leopold George Hill, John Stewart Mackintosh, and Joseph Robinson.

Bachelor of Medicine (M.B.).—William George Bendle, Roger Errington, Francis Percy Evers, Howard Tomlin Hunter, Ernest Percy Martin, Thomas Alfred Peel, Joseph Albert Sacco, Matilda Ann Sinclair, Alfred Tulloch Thompson, Olivia Nyna Walker, and Thomas Ruddock West.

Bachelor of Surgery (B.S.).—William George Bendle, Roger Errington, Francis Percy Evers, Howard Tomlin Hunter, Thomas Alfred Peel, Matilda Ann Sinclair, and Olivia Nyna Walker.

Bachelor of Hygiene (B.Hy.).—Thomas Lowe Bunting and Ruth Nicholson.

Diploma in Public Health (D.P.H.).—Thomas Lowe Bunting and Ruth Nicholson.

At the third examination for the degree of Bachelor of Medicine held recently the following candidates were successful:—

Pathology and Elementary Bacteriology, Medical Jurisprudence, and Public Health.—Second-class Honours: John Stanley Arkle and Herbert Grantham Dodd, College of Medicine, Newcastle-upon-Tyne. Pass-list: Edgar Babs and Theonie Renée Burrell, College of Medicine, Newcastle-upon-Tyne; Louis Ernest Seide Gellé, Edinburgh School of Medicine; William Joseph Hickey, College of Medicine, Newcastle-upon-Tyne; Felix Stephens Rood, University College, London; and Sidney Scott, College of Medicine, Newcastle-upon-Tyne.

FOREIGN UNIVERSITY INTELLIGENCE.—*Heidelberg:* Dr. E. Moro of Munich has been appointed Extraordinary Professor of Pædiatry.—*Leipsic:* Dr. F. Sieglbauer has been recognised as *privat-docent* of Anatomy.—*Naples:* Dr. Carlo Carginale has been recognised as *privat-docent* of Medical Semeiology (Symptomatology).—*Padua:* Dr. Giuseppe Zambelli has been recognised as *privat-docent* of Pædiatry.—*Pisa:* Dr. Eugenio De Sarlo has been recognised as *privat-docent* of External Pathology.—*Prague (German University):* Dr. Schloffer, Professor in Innsbruck, has been appointed to the chair of Surgery in succession to Dr. Wölfler, who is retiring.—*Rome:* Dr. Gaetano Perusini has been recognised as *privat-docent* of Neurology and Psychiatry.—*Sienna:* Dr. Giulio Dialti has been recognised as *privat-docent* of External Pathology.—*Vienna:* Dr. Norbert Ortner of Innsbruck has been appointed Professor of Medicine in succession to Professor v. Strümpell, who is going to Leipsic.

THE GUILD OF PLAY.—A successful entertainment under the auspices of this society was witnessed by a large and appreciative audience at the Bermondsey Town Hall on April 1st. A pageant, in which about 250 children took part, consisted of a long procession of groups of historic figures introduced by Father Time, representing the personages connected with the chief discoveries and events from the time of Alfred the Great to Queen Victoria. Afterwards several national songs and dances were given by the children in appropriate costumes. An urgent appeal is made for annual subscriptions to the Guild, in connexion with which there now exists a housewifery and domestic economy school, with a properly equipped laundry, where annually 15 Guild children are trained for some branch of domestic service. It is also desired to establish a children's settlement in Bermondsey, where, in a hall to be specially designed, it will be possible to demonstrate to teachers and others the Guild of Play methods. Further particulars may be obtained of Mrs. C. W. Kimmins, Dame Armstrong House, Harrow-on-the-Hill.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.—The annual general meeting was held on March 31st. Sir James Crichton-Browne, who presided, said that in earlier days formal education ended with the school and hospital. A continuous education was carried on by private reading or by some archaic apparatus in the corner of the surgery. The whole state of affairs was now changed; the field of battle against disease had been removed from the macroscopical to the microscopical and ultra-microscopical school. Biological research had extended in all directions, new media for investigation had been discovered, pathological investigations were conducted with intricate tests, and to keep abreast of his profession a man must go to school again and again under special and technically qualified teachers, renewing his education and carrying it further. To do justice to his patient he must also acquire a new technique. It was to the credit of the Polyclinic that it had put within the reach of busy practitioners facilities for carrying on the education requisite for their professional work. It was a college of advanced science for mature medical men, and, in his belief, it was destined to extend more and more. From his own recollection of his college days he knew that the medical school and hospital frequented by the ordinary medical student was not the place best adapted for study by the mature medical practitioner. The teaching there must necessarily be largely elementary. Moreover, the exuberance of youth and the sobriety of mature life did not always harmoniously blend. Consequently a special school was necessary for medical practitioners. Study leave was now given at intervals to medical officers of the Army and of the Navy on full pay who could resort to certain recognised schools and colleges to renew their studies. The Polyclinic should certainly be amongst the institutions so recognised by the War Office and the Admiralty. If it was not, representation might well be made on the subject. Amongst other speakers were Dr. J. Dundas Grant, Mr. C. G. Drummond Morier, Dr. J. Fletcher Little, Dr. W. Ewart, and Dr. F. J. McCann, who said that in the Polyclinic they had only

the nucleus of a great post-graduate institution. It must be quite independent of any existing hospital, and the policy of the open door must be maintained, for men came from Canada, Australia, or other colonies to see, not one particular man, but men attached to various hospitals. Only by one central institution would they be able to give what post-graduate students sought.

OPENING OF THE NEW OUT-PATIENT DEPARTMENT AT THE ROYAL INFIRMARY, LIVERPOOL.—The new out-patient department of the Liverpool Royal Infirmary was formally opened on March 29th by the Earl of Sefton, who was accompanied by the Countess of Sefton. Sir Archibald Williamson, Bart., M.P. (the new president), occupied the chair, and there was a large and distinguished gathering.

NURSING AND MIDWIFERY CONFERENCE AND EXHIBITION.—The Fourth Annual Nursing and Midwifery Conference and Exhibition was opened on April 4th, at the Royal Horticultural Hall, Westminster. The Conference was addressed by Sir Dyce Duckworth, who referred to the increasing appreciation of trained nurses in this country. English nurses, he said, were the envy of continental countries. A discussion on Massage was started by the matron of Guy's Hospital, Miss Hadley, who urged a massage school at each hospital. The conference lasted four days.

PRESENTATION TO A MEDICAL PRACTITIONER.—The council of the Nightingale Fund has presented Mr. John R. Lunn (late medical superintendent of the St. Marylebone Infirmary, Notting Hill, W.) with a picture, inscribed with the words, "Presented to Mr. John R. Lunn, F.R.C.S., in recognition of his valuable services rendered to the training school of nurses at the St. Marylebone Infirmary at the time of its establishment by the Guardians of St. Marylebone with the coöperation of the late Miss Florence Nightingale until his retirement, July 9th, 1910, and in remembrance of the interest she took in it and the sympathy she showed in its success."

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY.—The third annual report of the governing body of this institution, signed by the Earl of Crewe as chairman, and Sir A. Keogh as rector, has recently been issued. It deals with the year ending July 31st, 1910, and is a record of considerable progress in this recent addition to the scientific educational centres of this country. The Imperial College has for its constituent members the Royal College of Science and the City and Guilds College. The chief advances in the course of the year have been the erection of a large laboratory for mining and metallurgy for the work of the Royal School of Mines; and the extension of workshops for the City and Guilds College, which will be devoted to railway engineering and electric traction. It is announced that the Bessemer Memorial Committee has decided to grant £10,000 for the equipment of the mining and metallurgical laboratories, thus providing a memorial worthy of a great man of science, and an equipment commensurate with the aims of the Royal School of Mines, this institution being now united with the Royal College of Science. In regard to biological science, which is dealt with from the economic standpoint, instruction is given on the diseases of crops, and funds have been set aside for the foundation of a chair of plant physiology and pathology. The department of zoology has been reorganised under Professor Adam Sedgwick and Professor E. W. MacBride; in this department Mr. C. C. Dobell has been appointed lecturer on cytology and protistology, a course, says the report, "certainly the only one of its kind in England, and probably in Europe, dealing in a comprehensive way with this subject." In all the courses of advanced study the greatest importance is attached to practical exercises in the laboratory. A scholarship for aëronautics has been founded by the Women's Aërial League, and other scholarships for research in some branch of physics, chemistry, or engineering related to this youngest of the sciences are to be immediately established. It is not surprising that so young and zealous an educational institution should spend more than its income; the budget for the current year estimates for a deficit of £8368 on a total revenue of £59,000, and the governing body state that it is essential that further financial assistance shall be obtained from national or other sources. As it is now getting to be understood that there is no better form of national investment than the endowment of scientific technical instruction it is probable that the necessary funds will be forthcoming; the country may feel assured that they will be wisely administered by the governing body.

THE GRESHAM LECTURES.—The Gresham lectures on Physic founded by Sir Thomas Gresham, will be delivered at the City of London School by Dr. F. M. Sandwith at 6 P.M. on May 16th, 17th, 18th, and 19th.

A MEDICAL STUDENT KILLED.—Mr. Frederick John Palmer, a fourth-year student of St. Mary's Hospital, Paddington, was killed in the railway accident on April 3rd near Westbourne Park. He was to have gone in for his final examination on April 4th.

THE CITY OF LONDON LYING-IN HOSPITAL.—From the annual report of this institution for the year ending Dec. 31st, 1910, we learn that during the year 842 women were delivered of 854 children. Four women and 36 infants died. The daily average number of beds occupied was 33; the average stay of each patient 14·3 days. 2742 patients were attended at their own homes, 2789 children being born. One woman and 28 children died. 63 midwives and 81 monthly nurses were trained in the hospital during the year. The total income for the year was £6005 3*s.* 3*d.*, the expenditure exceeding that sum by £946 10*s.* 10*d.*, of which £659 4*s* 4*d.* was interest on the loan. To reduce this loan the committee regretfully was compelled to sell £5000 of stock. They earnestly appeal for contributions to reduce the still heavy debt of £13,500, the interest on which is a serious burden.

UNIVERSITY OF SHEFFIELD.—The Council at its meeting held on March 31st made the following appointments:—(1) Mr. R. J. Pye-Smith, Ch.M. Sheffield, F.R.C.S. Eng., as Emeritus Professor of Surgery; (2) Mr. Arthur M. Connell, F.R.C.S. Edin., to the Lectureship in Surgery, which was rendered vacant through Dr. Sinclair White's appointment to the Professorship of Surgery made at the meeting of the Council held on Feb. 24th; (3) Mr. J. D. Fiddes, M.A., B.Sc., M.B., Ch.B. Aberd., to the Demonstratorship in Anatomy, in succession to Mr. Alexander Wilson, resigned; (4) Mr. F. H. Marsden, B.A. Sheffield, as honorary member of the staff in the Department of Education. At the same meeting Professor J. M. Beattie was appointed representative of the University at the celebration of the 500th anniversary of the foundation of the University of St. Andrews, to be held from Sept. 12th to 15th next.

THE SPECIALIST IN JOURNALISM.—In pursuance of resolutions passed in connexion with papers and discussions at the last annual conference of the Institute of Journalists, a meeting of editors and members of editorial staffs of journals identified with technical, scientific, and commercial subjects was held on March 27th at the hall of the institute. The Hon. Harry Lawson, M.P., ex-president, took the chair on behalf of the president of the institute. Mr. A. C. Meyjes, in the course of a short address, offered reasons why it was desirable to give more definite and practical effect to the professional principles and uses of the institute in the different spheres of scientific or commercial journalism. After discussion it was resolved to form within the London district a section of specialist members in the form of an auxiliary committee holding communication with the London district and with the institute at large through its own chairman and correspondent, and a committee of 11 members was appointed to prepare a scheme for submission to a further meeting.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following is the list of prizes awarded for the winter session, 1910–1911:—Systematic anatomy: W. H. Carden, first prize (£2) and medal; L. S. O'Grady and R. P. Weldon (equal), second prize (£1) and certificate. Practical anatomy (first year): A. F. Carbury, first prize (£2) and medal; P. J. Polson, second prize (£1) and certificate; (second year) M. Shipsey, first prize (£2) and medal; W. Morrow, second prize (£1) and certificate. Practice of medicine: M. J. Hillery, first prize (£2) and medal; Vernon J White, second prize (£1) and certificate. Surgery: M. J. Hillery, first prize (£2) and medal; Vernon J. White, second prize (£1) and certificate. Midwifery: M. J. Hillery, first prize (£2) and medal; Vernon J. White, second prize (£1)

and certificate. Physiology: W. H. Carden, first prize (£2) and medal; R. P. Weldon, second prize (£1) and certificate. Chemistry: L. M. Rowlette, first prize (£2) and medal; P. J. Polson, second prize (£1) and certificate. Pathology: G. N. Smyth, first prize (£2) and medal; G. E. Pepper, second prize (£1) and certificate. Physics: J. W. E. Graham, first prize (£2) and medal; J. C. Fergusson, second prize (£1) and certificate. The lectures and practical courses of the summer session commenced on Monday, April 3rd.

Mr. Stephen Paget, the honorary secretary of the Research Defence Society, informs us that his committee desires to contradict the report that H.M. the King of Denmark is patron of an "Animal Protection and Anti-vivisection Congress" to be held this year in Copenhagen. "The Danish press," Mr. Paget writes, "has just published an official information that His Majesty has withdrawn his patronage from this Congress. One of his Ministers also has withdrawn his acceptance of the presidency of the congress; and the speakers of the Danish Houses of Parliament have withdrawn their assent to the Congress using the rooms of the Representatives." The Research Defence Society (21, Ladbroke-square, London, W) does good service in keeping the public accurately informed in these matters.

CHELSEA HOSPITAL FOR WOMEN.—The fortieth annual meeting of the governors was held at the hospital on March 30th, the President, Viscount Castlereagh, being in the chair. A very satisfactory report was presented by the council for 1910. Her Majesty the Queen has become a patron of the hospital and Viscount Castlereagh president of it. The rebuilding of the out-patient department and nurses' home was urgent, the present accommodation being utterly inadequate. A large sum—£10,453—had been received in bequests, nearly £3000 of that amount under discretionary power of executors. The annual subscriptions had been well maintained. Lord Castlereagh, commenting on the report, stated that it was a matter of much regret to the council that it was impossible, owing to the limitations of the hospital site, to add the isolation accommodation for special cases which the medical staff said was urgently necessary. The convalescent home had been redrained and put in a state of thorough repair at considerable expense. A handsome shelter had also been erected in the grounds, mainly by the generosity of Mrs. Hilditch. The council's report showed that a time had come in the hospital's existence when capital expenditure was urgently necessary. Mr. J. Bland-Sutton, seconding the adoption of the report, stated that the council would be well advised to consider the necessity of rebuilding the hospital itself at the same time that the out-patient department and nurses' home were reconstructed. The hospital was far behind present-day requirements and could not be brought into line with them.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Street Accidents Caused by Vehicles.

AN increase in the number of street accidents caused by vehicles took place in the year 1910, as compared with the year 1909. The return which gives the statistics on the subject compiled from the information in the hands of the police has just been published as a Parliamentary paper. The total of the street accidents caused by vehicles for the year 1910 for the United Kingdom was 31,077, as compared with 28,023 in 1909. Fatal accidents rose from 1151 in 1909 to 1327 in 1910. Non-fatal accidents increased from 26,872 in 1909 to 29,750 in 1910. The substantial part of the increase is in regard to accidents caused by mechanically propelled vehicles. The fatal accidents occurring from this cause rose from 508 in 1909 to 672 to 1910, and the non-fatal from 13,137 in 1909 to 16,128 in 1910.

International Cancer Research Conference.

Dr. E. F. BASHFORD'S report to the Lord President of the Council on the Second International Conference on Cancer Research held at Paris from Oct. 1st to 5th, 1910, has been issued. "Reviewed as a whole," Dr. BASHFORD writes, "the conference must be pronounced to have been of value. In my opinion, should another International Conference take place, it will be held under much more favourable auspices both as regards working arrangements and the selection of subjects for discussion and action, notwithstanding the fact that knowledge of cancer is still so vague or ambiguous as to have prevented unanimity, or even a basis for discussion, from being obtained on many points at the conference in Paris. In particular the delegates were divided upon such fundamental matters as the etiology of cancer, and on what is and what is not a legitimate application of statistical methods to the investigation of the frequency of cancer. Whilst some delegates, of high standing, advocated its parasitic or infectious nature, others of equal authority strongly opposed such a view. No progress was made towards compiling comparable international statistics of the incidence of cancer; nevertheless, in my opinion, the discussion of the plan proposed was a pressing need, of which the importance is but emphasised by the failure of the project to secure the approval of the delegates. Only good can result from discarding those fallacious methods by which attempts have been made to arrive at a speedy elucidation of the significance attaching to variations in the numbers of the deaths recorded from cancer in different countries at the same time, and in the same geographical area—large or small—at different times."

Shell-fish and Enteric Fever.

A voluminous report has been presented to Parliament in which Dr. H. TIMBRELL BULSTRODE deals with the conditions under which certain shell-fish other than oysters are grown, collected, cleansed, and stored, and the relation of such treatment to the prevalence of enteric fever and other illness. The report is prefaced by observations by Dr. ARTHUR NEWSHOLME, the medical officer of the Local Government Board, in which he alludes to the dangerous conditions and practices which still obtain at some of the most important centres in which shell-fish are grown.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 29TH.

Books of Instruction for Territorial Medical Officers.

Mr. GIBBS asked the Under Secretary of State for War whether books of instruction could be supplied gratis to medical officers of the Territorial Army.—Colonel SEELY wrote in reply: These officers receive a copy gratis of the Royal Army Medical Corps Training and the Field Service Regulations, Part I.

Police Medical Appointment.

Mr. MARTIN asked the Secretary of State for the Home Department whether Dr. Starkie was appointed medical officer to the police at Pratt-street station, in Somers-town, East St. Pancras, as part of an arrangement by which the previous incumbent, Dr. Thompson, sold his practice to Dr. Starkie, who up to a few days ago was not a resident of the district, and, if so, why were medical men resident in the district asked to send in applications for the position?—Mr. CHURCHILL answered: Dr. Starkie was not appointed divisional surgeon at Somers-town as part of any such arrangement. The invariable rule in making these appointments is to select from among the applicants the candidate who is considered to have the best qualifications for the post, and this rule was observed in the present case. A non-resident medical man is never appointed, but length of residence is obviously a minor factor. Dr. Starkie has, I understand, been residing near Somers-town police-station since May last.

Medical Service at Scottish Collieries.

Dr. CHAPPLE asked the Lord Advocate whether he was aware of the practice of many owners of collieries and brickworks in Scotland of deducting sums from their workmen's wages for medical services, notwithstanding the fact that such workmen belonged to friendly societies and had their own medical men, and, if so, whether he would introduce legislation on the subject.—Mr. CHURCHILL wrote in reply: I will answer this question. I am aware that the practice mentioned exists in some parts of Scotland as well as in other parts of the kingdom, but I do not know to what extent it affects workmen who are members of friendly societies. Such arrangements are authorised by Section 23 of the Truck Act of 1831, but it is expressly stipulated that there shall be an agreement in writing signed by the workman. Evidence on the subject was taken by the Truck Committee and the recommendations of the committee in this matter will be considered when the amendment of the Truck Acts is taken in hand.

Cholera and Typhoid Fever in India.

Mr. BARTON asked the Under Secretary of State for India whether, seeing that unfiltered drinking water had been a cause of cholera and typhoid fever, he would endeavour to have it made compulsory on all factory owners in India to supply a reasonable quantity of filtered drinking water to all employees during working hours.—Mr. MONTAGU replied: The maintenance of an adequate supply of good drinking water in Indian factories is already secured by rules made under the Factories Act by the local governments. The Labour Commission found that little, if any, exception could be taken to the arrangements for supplying water, and that in many factories special attention had been given to the question.

Yellow Phosphorus Matches in India.

Viscount WOLMER asked the Under Secretary of State for India whether steps had been taken to secure the adoption by the Indian Legislature of provisions forbidding the manufacture of matches with yellow phosphorus in India, or their importation from that country.—Mr. MONTAGU answered: The Government of India has informed the Secretary of State of its intention to legislate on the lines of the White Phosphorus Matches Prohibition Act, which prohibits the manufacture, sale, and importation of such matches in this country.

MONDAY, APRIL 3RD.

Aliens and Vaccination

Mr. ASTOR asked the President of the Local Government Board what steps were being taken to ascertain whether aliens coming to England had or had not been vaccinated, and whether any steps were taken to secure the vaccination of aliens who were found not to be vaccinated.—Mr. BURNS replied: So far as I am aware it is not usual to examine aliens for the purpose of ascertaining whether they have been vaccinated. As regards the latter part of the question, it is the duty of the vaccination officer to see that all children resident in his district are duly accounted for as regards vaccination.

TUESDAY, APRIL 4TH.

Vaccination in Sheffield.

Mr. SAMUEL ROBERTS asked the President of the Local Government Board what were the number of declarations of conscientious objection to vaccination made under the Act of 1907 in the city of Sheffield for the years 1908, 1909, and 1910 respectively, and their percentages to births in each of those years.—Mr. BURNS answered: I am unable to give the numbers of statutory declarations of conscientious objection to vaccination made in the city of Sheffield, but the figures for the two Poor-law unions of Ecclesall Bierlow and Sheffield, which include the city, and to which the city contributes about 96 per cent. of the population, are as follows:—

	Declarations.	Percentage of declarations to births.
1908	1047	7·1
1909	1537	11·1
1910	2026	15·3

Lead Poisoning.

Mr. HILLS asked the Secretary of State for the Home Department whether he was aware that 15 cases of lead poisoning occurred in the china and earthenware trade in the first two months of 1911 against eight in the same period of 1910; whether the report of the principal chemist of the Government laboratory for 1910 called attention to the fact that samples of glaze taken from works where lead poisoning occurred contained lead oxide in proportions varying from 12·6 to 47·5 per cent.; and what action he intended to take.—Mr. CHURCHILL said in reply: I am aware of the increase in the number of reported cases which coincides with increased activity in the trade, and also of the results of the analyses referred to which were undertaken by the Government laboratory for the Home Office. As the honourable Member is no doubt aware, the whole question has been the subject of an exhaustive inquiry by a representative committee and I am proposing to take steps to give effect to their recommendations.

WEDNESDAY, APRIL 5TH.

Maternity Cases in Rural Villages.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether there would be overlapping as between the existing county nursing associations and the district councils, under the Health Visitors Bill, in the provision of assistance and advice in maternity cases in the rural villages; and, if so, whether he would amend the above Bill to prevent such overlapping and to secure effective coöperation between them.—Mr. BURNS replied: The adoption of the Notification of Births Act requires the consent of the Local Government Board. Before consenting to the adoption of the Act it is the Board's practice to inquire as to the means available for utilising, to the advantage of the mothers and infants, the information as to births which would be received under its provisions. In some cases it has been found that no existing agencies are available and that it is desirable that the local authorities should be able themselves to appoint health visitors. I do not think that there is any danger of serious overlapping.

Mr. CHARLES BATHURST also asked the right honourable gentleman whether he could state in how many counties county nursing associations existed, and how many of them worked in conjunction with the local authorities in affording help and advice in maternity cases within their administrative areas.—Mr. BURNS said in reply: There are 20 county nursing associations affiliated to the Queen Victoria's Jubilee Institute for Nurses and several other county nursing associations not so affiliated. Grants are in most of these cases made to the associations by the county councils or the education committees. The work of these voluntary associations is not under my control, but I have no doubt they render efficient help to the local authorities in assisting to combat sickness and mortality.

BOOKS, ETC., RECEIVED.

BLACK, ADAM AND CHARLES, London.

Text-book of Operative Surgery. By Dr. Theodor Kocher, Professor of Surgery and Director of the Surgical Clinic in the University of Bern. Third English edition. Authorised translation from the Fifth German Edition. By Harold J. Stiles, M.B., F.R.C.S. Edin., and C. Balfour Paul, M.B., F.R.C.S. Edin. Price 30*s.* net. (By post 30*s.* 6*d.*)

CHAMBERS, W. AND R., LIMITED, 38, Soho-square, London, W., and 339, High-street, Edinburgh.

Inorganic Chemistry. By F. Stanley Kipping, Ph.D., Sc.D., F.R.S., and W. H. Perkin, Ph.D., Sc.D., LL.D., F.R.S. Price 7*s.* 6*d.*

CHURCHILL, J. AND A., London.

Foods and their Adulteration. Origin, Manufacture, and Composition of Food Products; Infants' and Invalids' Foods; Detection of Common Adulterations; and Food Standards. By Harvey W. Wiley, M.D., Ph.D. Second edition, revised and enlarged. Price 21*s.* net.

INSTITUT OSWALDO CRUZ, Caisse postale, 926, Manguinhos, Rio de Janeiro.

Memorias do Instituto Oswaldo Cruz. Tomo II. Faciculo II. Price not stated.

MACMILLAN COMPANY, THE, New York.

Chemistry of Food and Nutrition. By Henry C. Sherman, Ph.D., Professor in Columbia University. Price 6*s.* 6*d.* net.

MARHOLD, CARL, Halle a.S.

Sammlung Zwangloser Abhandlungen aus dem Gebiete der Verdauungs- und Stoffwechsel-Krankheiten. Herausgegeben von Professor Dr. A. Albu in Berlin. III. Band, Heft I. Beiträge zur Diagnostik der Inneren und Chirurgischen Pankreaserkrankungen. Von Prof. Dr. Albert Albu in Berlin. Abonnementspreis für 1 Band=8 Hefte, Mark 8. Einzelpreis dieses Heftes beträgt M.2.80.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

BRADFORD, R. G., M.B., Ch.B. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Brownhills District of the county of Staffs.

BROWN, RALPH, M.B., B.S. Lond., has been appointed Assistant Physician to Bethlem Royal Hospital.

BUCKLEY, G. G., M.D. Vict., D.P.H., has been appointed Medical Officer of Health of Bury.

CARGILL, L. V., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Governor of King's College, Wimbledon.

COOPER, P. R., L.D.S. R.C.S., has been appointed Honorary Dental Surgeon to the Royal Portsmouth Hospital.

HERRINGHAM, W. P., M.D. Dub. & Lond., F.R.C.P. Lond., has been appointed a Representative of the Faculty of Medicine on the Senate of the University of London.

JOHNSON, T. C., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Yatton District of the county of Somerset.

PETTEY, T., F.R.C.S. Eng., has been appointed Assistant Medical Officer to the Princess Alice Hospital, Eastbourne.

ROBERTSON, J., M.B., C.M. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Clackmannan District of the county of Clackmannan.

TAYLOR, H. W., L.D.S. R.C.S., has been appointed Honorary Dental Surgeon to the Royal Portsmouth Hospital.

TRAVERS, F. T., M.B., B.S. Lond., F.R.C.S. Edin., has been appointed Governor of the Maidstone Grammar Schools.

WEIGHTON, H., M.D. Edin., has been appointed Medical Officer to the Teesdale Union.

WILLIS, J. K., M.B. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Cranleigh District of the county of Surrey.

WINTER, P. G. D., L.D.S. R.C.S., has been appointed Honorary Dental Surgeon to the Royal Portsmouth Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERYSTWYTH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £150 per annum.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £80 per annum and all found.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

BIRKENHEAD UNION INFIRMARY AND SANATORIUM.—Senior Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BIRMINGHAM PARISH INFIRMARY.—Resident Medical Officer. Salary £104 per annum, with apartments, rations, &c.

BOLTON INFIRMARY AND DISPENSARY.—Third House Surgeon. Salary £90 per annum, with apartments, board, and attendance.

BRIGHTON, ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road.—House Surgeon for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRISTOL GENERAL HOSPITAL.—House Physician, Assistant House Physician, and Casualty House Surgeon. Each for six months. Salary £60, with board, residence, &c.

BURY INFIRMARY.—Senior House Surgeon. Salary £110 per annum, with board, residence, and washing. Also Junior House Surgeon. Salary £80 per annum, with board, residence, and washing.

CAMBRIDGE, COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £140 per annum, with board, lodging, and attendance.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence.

CHARING CROSS HOSPITAL, W.C.—Resident Medical Officer. Salary £100 per annum, with full board.

CHELTENHAM GENERAL HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with board, laundry, and residence.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £120 per annum, with board, lodging, and laundry.

DORCHESTER ASYLUM.—Assistant Medical Officer. Salary £190 per annum, with board, &c.

DUMFRIES COUNTY COUNCIL.—Deputy County Medical Officer, &c. Salary £300 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer to Casualty Department for six months. Salary at rate of £100 per annum, with luncheon and tea. Also Officer for Electrical Department. Salary £75 per annum.

GLASGOW, LIGHTBURN JOINT HOSPITAL FOR INFECTIOUS DISEASES, Shettleston.—Resident Physician. Salary £150 per annum, with board, &c.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HEREFORD, HEREFORDSHIRE GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board, apartments, and washing.

HOLBORN UNION, CITY-ROAD WORKHOUSE, Shepherdess-walk, N.—Medical Officer. Salary £260 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physician for six months. Salary 30 guineas.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Senior and Junior House Surgeons. Salary £100 and £90 per annum respectively, with board, washing, and residence.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board.

LEAMINGTON, WARNEFORD, LEAMINGTON, AND SOUTH WARWICKSHIRE GENERAL HOSPITAL.—Junior Resident Medical Officer. Salary £85 per annum, with residence, board, and laundry.

LEICESTER INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, apartments, and washing.

LIVERPOOL STANLEY HOSPITAL.—Two Junior House Surgeons. Salary £70 and £60 per annum respectively.

LONDON FEVER HOSPITAL, Islington, N.—Assistant Physician.

MANCHESTER ROYAL INFIRMARY.—Director of Cancer Research Laboratory. Salary £300 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant House Physician for seven months. Salary at rate of £40 per annum, with full board and washing.

NEWPORT, NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £60 per annum, with board, residence, and laundry.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—Assistant House Surgeon for six months. Salary £20, with board, lodging, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £180. Also Assistant. Salary £160 per annum, with apartments, attendance, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician. Salary £75 per annum. Also Junior House Surgeon and Junior House Physician. Salaries £50 per annum. All with residence, board, and laundry. Also Honorary Physician to the X Ray and Electrical Department.

READING, ROYAL BERKS HOSPITAL.—Second House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROCHDALE INFIRMARY.—Junior House Surgeon, unmarried. Salary £80 per annum, with board, residence, and laundry.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

ROYAL DENTAL HOSPITAL OF LONDON, Leicester-square.—Morning House Anæsthetist. Salary £25 per annum.

ROYAL EAR HOSPITAL, Soho.—House Surgeon. Salary £40 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Surgeon.

ROYAL NAVAL MEDICAL SERVICE.—Twelve Commissions.

ST. HELENS, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £250 per annum.

ST. PAUL'S HOSPITAL FOR SKIN AND URINARY DISEASES, Red Lion-square, W.C.—Clinical Assistant.

SHEFFIELD, JESSOP HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £60 per annum, with board and residence.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £65 per annum, with board and residence.

STOCKPORT INFIRMARY.—Junior House Surgeon. Salary £80 per annum, with board, washing, and residence.

SWANSEA, COUNTY BOROUGH OF.—Medical Officer of Health. Salary £500 per annum.

SWANSEA GENERAL AND EYE HOSPITAL.—House Physician. Salary £75 per annum, with board, washing, and attendance.

TAUNTON, TAUNTON AND SOMERSET HOSPITAL.—House Surgeon. Salary £120 per annum, with board, lodging, and laundry.

THROAT HOSPITAL, Golden-square, W.—Resident House Surgeon. Salary £75 per annum, with board, residence, and laundry.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Locum Tenens Medical Officer, unmarried, for about four or five months. Salary 4 guineas per week, with apartments, board, attendance, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant Resident House Surgeon, unmarried. Salary £75 per annum, with board, residence and washing.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—House Surgeon. Also Junior House Physician. Salaries £100 and £75 per annum respectively.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Carnarvon, in the county of Carnarvon; at Witney, in the county of Oxford; and at Arbroath, in the county of Forfar.

Births, Marriages, and Deaths.

BIRTHS.

DASHWOOD-HOWARD.—To Dr. and Mrs. Dashwood-Howard, at Fairlight, Hampton Hill, S.W., on March 31st—a son.

DICKIE.—On March 31st, at Ardenclutha, Marton, S.O., Yorks, the wife of W. S. Dickie, F.R.C.S., of a son.

MARRIAGES.

CLARKE-COHEN—SIMON.—On March 29th, Edward Clarke-Cohen, M.D., M.R.C.S., L.R.C.P., to Helen Maud, youngest daughter of the late Julius Simon.

DEATHS.

MARSHALL.—On April 1st, Francis John Marshall, M.R.C.S., aged 68 years.

MARSTON.—On March 31st, at Nevern-square, S.W., Surgeon-General Jeffery Allen Marston, C.B., Honorary Surgeon to the King, aged 79 years.

SWAIN.—On April 1st, at Ramsgate, William Darroch Pennington Swain, M.R.C.S., L.S.A., aged 82 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CLIMATIC AND HEALTH CONDITIONS IN THE EAST AFRICA PROTECTORATE.

A NEW handbook of general information as to the East Africa Protectorate has just been issued from His Majesty's Stationery Office after revision by the Governor of the Territory, Lieutenant-Colonel Sir E. P. Girouard, K.C.M.G., whose imprimatur may be regarded as giving the contents special value. The Protectorate, it is pointed out, is essentially a new country. A few years ago, everything between the coast towns and the kingdom of Uganda was regarded as a savage wilderness. Now, thanks to the construction of the Uganda Railway, a line 584 miles long, extending from Mombasa to Lake Victoria, with steamers traversing the lake, this vast region is well known, and large tracts of agricultural and pastoral lands have been opened up to European colonisation. It has naturally not been possible to complete the organisation of so young a territory on permanent lines within the brief period of its existence, but the introduction of civilisation and order is proceeding rapidly. The chief port is Mombasa, with the magnificent harbour of Kilindini, and a population of about 30,000. The Protectorate is administered under the Colonial Office by a Governor, with the assistance of an Executive and Legislative Council, and is divided into seven provinces, each in charge of a Commissioner. English law is administered, supplemented by local regulations and ordinances and a few applied Indian Acts. There are very stringent regulations restricting immigration, but these are not intended to prevent *bonâ-fide* settlers and working men from entering the country. All the leading religious denominations are represented in the Protectorate, and both the English and Roman Catholic Churches have places of worship at Mombasa and Nairobi (the capital), as well as in various mission stations.

The various parts of the Protectorate differ greatly in character, climate, and products. The Highlands—the central plateaux, situated in the provinces of Ukamba, Naivasha, and Kisumu—possess a temperate climate, are capable of growing European crops of all kinds, and are considered by the residents to be quite suitable for colonisation by European immigrants. The Lowlands—the districts on the coast, along the Tana and Juba rivers and around Lake Victoria—are tropical regions not suitable for European colonisation, though the climate (except, perhaps, round Lake Victoria) is not as unhealthy as that of the west coast or many other plantation countries, and officials and men of business can do their work in Mombasa and the other coast towns with no greater inconvenience or danger to health than they would experience in India or Ceylon.

The Taita hills, about 100 miles from the coast, possess an excellent climate, and several missionary settlements have been founded on them. They are fertile, well-watered, and thickly populated by natives. Though the Highlands have been opened up only very recently, there are several Europeans who have inhabited them for 12 or 15 years, and their experience justifies the assertion that the climate is healthy and invigorating. The days are, generally speaking, pleasant, and although the sun is hot about mid-day, yet it is a heat that is clear and dry. The nights are always cool and often quite cold. Above 8000 ft. ice may be seen in the early mornings. A blanket is indispensable, and at times several. At elevations exceeding 5000 ft. a European can usually work out of doors from 6 A.M. to 10 A.M. and from 3 P.M. to 6 P.M., and on many days in the year work in the open is possible all through the day, but the sun is always powerful at noon. Perhaps the most important question for settlers is: "Can children who are born here live and thrive in the country?" The answer is: "Yes," as is evidenced by the many robust children born and bred in the Highlands. Europeans can with moderate care live in almost the same way as in England. Food should be well cooked and clean; water should be boiled and, if possible, filtered. As a general principle a tepid or warm bath should be taken in preference to a cold one. The head should be properly protected when outside in the sun. People should not sleep on the ground. There are Government medical officers at Nairobi, Nakuru, Fort Hall, and Kigamu, who are allowed to take private practice, and there is a mission doctor in Kikuyu. Private practitioners are established in Mombasa and Nairobi, as also a dentist. There are European hospitals at Mombasa and Nairobi, and chemists from whom drugs can be obtained.

In the Highlands there is now a considerable resident European population, and settlers arriving there would not find themselves cut off from the amenities of social life. In Nairobi there are several hotels, a club, and a racecourse, meetings being held there three times yearly—in January, July, and October. The Nairobi Foxhounds hold regular meets in season. There are excellent cricket grounds and tennis-courts and a good golf course which is extensively patronised. Polo is played three times week, and gymkhanas are

held at intervals; football is very popular. There is a rifle range and a volunteer company is being formed. The Legion of Frontiersmen is also represented. Trout have been introduced into one of the mountain streams and are doing well. Shooting of all kinds can be had in the vicinity. There are private hotels at Naivasha, Nakuru, and the Kika River, and one is being erected at Londiani amidst the lovely scenery of the Mau escarpment. The administration of the Uganda Railway have erected rest houses at Voi, Makinchu, Muhoroni, and Port Florence. The natives are now quite friendly in all the accessible districts. Europeans are not allowed to enter districts where there is supposed to be any danger.

There are wet and dry seasons. The wet seasons vary in length and sometimes in date, but generally speaking there are two—one from November till the end of December, and the other from March to May. The remaining months are usually dry, but there have been rains right up to the end of June, and at times in February. July, August, and September are cold months as a rule. The mean average temperature is 67° F. at 9 A.M. and 78° F. at noon, while the nights are much colder, and the thermometer often goes down to 45° in the early morning. The heat increases at times to about 80° at midday.

The foregoing statements have more particular reference to the Highlands. What follows concerns principally the Lowlands—in other words, the greater part of the provinces of Jubaland, Tanaland, Seyidie, and Nyanza—where the climate is better suited for natives than for Europeans. The coast strip may be described as a moderately rich subtropical country. It has not the extreme fertility of Zanzibar, but, on the other hand, it is more healthy. A few places, as, for instance, Vanga and the forests near the Tana river, are distinctly feverish, but the principal parts will compare favourably in this respect with those of other tropical countries, and the evils of the unhealthy districts are being greatly mitigated by the provision of proper accommodation and comforts.

The principal town, Mombasa, is the terminus of the Uganda Railway and has a small harbour of its own, besides being connected by a tram-line with the port of Kilindini, two miles distant, which is one of the finest harbours on the east coast of Africa. Both Mombasa and Kilindini are situated on an island, separated from the mainland by a narrow arm of the sea. There are two seasons, called after the prevailing winds, the north-east and south-west monsoon. The former lasts from the end of November till March, and it is the hot dry season; the latter from April to November. The lesser rains fall in October and November; the greater last from April to July, but are sometimes later. The coolest time is from July to October, when the thermometer often falls to about 70° F. in the evening. The hottest season is from January to April, and the temperature does not rise much beyond 90° in the daytime, but owing to the humidity of the atmosphere the heat is often more trying than the actual thermometer readings would seem to warrant. The nights are, as a rule, fairly cool, but between the monsoons, when the breeze drops, are often very oppressive. On the coast ordinary English summer clothing can be worn during the cooler months, but during the greater part of the year Europeans will discard everything except a vest and white drill suit. Perhaps the most essential article of all is the sun hat. Pith helmets are good and not so heavy as the ordinary helmet. House rent at Mombasa is rather high, and bungalows are extremely scarce and difficult to obtain. Old Arab-built houses, for those who prefer a stone building, can be found at a rental of 100 rupees a month, but they are not generally considered as healthy or comfortable as the bungalows of modern date. It is probable that when the survey of the island is completed, and the question of the ownership of land settled, new houses will spring up rapidly to meet the demand.

A coastal service is being maintained, the usual ports of call being Zanzibar, Wasin, Mombasa, Kilifi, Malindi, Lamu, and Kismayu. To travel by land in parts where there is no rail accommodation it is necessary for the traveller to take his tent, cook, and servant. His equipment should consist of camp bed and bedding, waterproof sheet, mosquito net, a folding table, light canvas chairs, cooking utensils, lamp, water bottle, and shot gun; also groceries, wines, and spirits according to the length of the journey. There are Government medical officers at Kisuma, Mombasa, Lamu, and Kismayu, who are allowed to take private practice, but travellers visiting the Protectorate should take with them a medicine chest, the following list of drugs and dressings being suggested in the handbook: Purgative tablets, 1 oz. chlorodyne, 100 tablets phenacetin, 200 tablets quinine bi-hydrochloride, 100 tablets Dover's powder, ¼ lb. permanganate of potash, 1 lb. alum, 1 lb. sulphate of soda, 1 pot hazeline snow or similar ointment, 1 clinical thermometer, 1 pair of scissors, ¼ lb. absorbent wool, ¼ lb. boric lint, 1 oz. gutta-percha tissue or oiled silk, and a few yards of cotton sheeting for bandages.

A "MEDICAL AID SOCIETY."

WE have received several copies of a circular of a so-called "Medical Aid Society," signed by one "E. Muret, secretary." With the circular, which, we are informed, is being delivered broadcast to the houses in Somers Town, two or three being put under each house door, is enclosed a printed envelope addressed to "Dr. E. Muret," 2, Gloucester-street, Southampton-row, W.C. This gentleman's name does not appear on the Medical Register. The circular invites th reader to join the society, which promises to provide for the sum of 3d. weekly medical help and medicines in case of illness. The circular is very plausibly written and will doubtless catch many of the unwary. No names of any medical attendants are given. Somers Town seems to form a fruitful field for quackery, seeing that the market held in Charlton-street on Friday is always attended by dental, liver, ulcer, and other "specialists," who presumably drive a fruitful trade there.

THE EXCURSIONS OF A DISTRICT NURSE.

To the Editor of THE LANCET.

SIR,—I take the liberty of asking your opinion on this matter. In the district in which I practise a district nurse has been appointed by a philanthropic lady, aided by subscriptions, whist drives, &c. Now this nurse acts as an unqualified practitioner; wherever she hears of anyone being ill, irrespective of a medical man being in attendance, and uninvited even by the patient's friends, she presents herself. She also goes about soliciting for work, which consists in prescribing medicine, just as if she were a duly qualified practitioner. Now, could you inform me if this is a nurse's work? And have I any remedy to put a stop to it or not?

I am, Sir, yours faithfully,

March 31st, 1911. VERITAS.

*** There is no legal remedy so long as the nurse does not pretend to be a registered practitioner.—ED. L.

CLEAN MILK.

WE are informed that over 100,000 copies of the leaflets on clean milk, published by the National League for Physical Education and Improvement, have been distributed within the last few months by officials connected with health authorities and national and local health societies. The leaflets have been supplied to many education authorities for distribution among the school children when lessons in domestic hygiene are being given, and also for the instruction of the teachers themselves. The League thinks rightly that it is among the rising generation that simple practical instructions on domestic hygiene are most required.

THE MIDWIVES BILL AND "COVERING" UNQUALIFIED PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of March 11th (p. 708) the proposals of the Nurses' Registration Bill are summarised. I do not think that any member of the profession will be found who will deny the obvious fact that an immense amount of unqualified practice is being carried out by nurses, and that for most of this medical men themselves are responsible. Clause 23 of the new Nurses Bill will not fully meet the situation. That clause should be widened so as to prevent any nurse from attending a patient for a longer period than 24 hours without the presence of a doctor. No nurse should be allowed to attend under circumstances which involve the discharge of medical duties which would be unprovided for by the specific and detailed direction of a doctor. Surely if an ulcer, for instance, is handed over to the exclusive care of a nurse that is medical treatment. Whatever was done by a medical practitioner before the introduction of trained nurses should be still done by such, inasmuch as the function of the trained woman is not to break new ground but to attend to the olden sphere better than the untrained servitor. The present Nurses Bill should be blocked until a conference of general medical practitioners should be called together to frame under legal guidance a clause that would meet the situation.

I am, Sir, yours faithfully,

Cashel. THOMAS LAFFAN.

*** In a country place a medical man often could not attend every patient once in every 24 hours; there is very frequently no reason why he should so attend.—ED. L.

HEALTH IN UGANDA: SLEEPING SICKNESS.

A REPORT, prepared by Mr. Alison Russell, Acting Chief Secretary, on the Blue-book of the Uganda Protectorate for the financial year 1909-10, has been received at the Colonial Office and presented to Parliament. In the section of the report devoted to health and sanitation it is stated, *inter alia*, that the public health during the year was good. There was again an increase in the number of admissions of natives to Government hospitals as well as in the number of out-patients treated at the Government dispensaries, and this, it is expected, will continue to be the case year by year as the natives acquire greater confidence in the European methods of treatment. There was a marked increase in the number of deaths during the year—204, as compared with 122 in the previous year. One factor in this increased mortality rate, which is not so great comparatively as it appears to be, is the lessening dread of hospitals by the natives, and accordingly natives bring in their sick and allow them to die in the hospital instead of, as formerly, removing them when in a critical condition to die at home. Another factor was an outbreak of plague in the Mbale District, and 37 deaths from the disease are included in the returns from Mbale Dispensary.

The health of European Government officials was on the whole good, as was that of Europeans generally, considering the climatic conditions. The chief causes of sickness were malarial fever, diseases of the digestive system, and diseases of the respiratory system. Only

two cases of blackwater fever were recorded. Tick fever gave 15 admissions, as compared with five in the previous year. This number should be very considerably reduced next year, as all tick-infested bandas have been destroyed and directions are given to all officials not to use old rest-houses or camping grounds.

In regard to natives, including Asiatics, the total number of cases treated at Government native hospitals and dispensaries was 35,905. The death-rate among cases treated was 3·6 per 1000. The cases of small-pox and malarial fever among natives have largely decreased, but cases from tick fever have shown a large increase, notwithstanding that the natives are now well aware of the cause of the disease. They seem, however, to be almost incurably careless in taking ordinary precautions against being bitten by the ticks. Of the total admissions, 5 were due to scorpion stings and 9 to snake bites.

The success which attended the preventive measures enforced against sleeping sickness in 1908 continued during 1909. The rules under the Sleeping Sickness Ordinance have been carried out on the whole most satisfactorily in spite of many natural difficulties. The process of removal of natives from contact with fly areas has been extended, and has included the removal of the people from Bugungu to a location in Unyoro, and the depopulation of the islands of Lake Victoria. From the Bungungu district on Lake Albert and the Nile over 5315 persons had been removed at the end of June, 1909, and subsequently 1095 persons who had migrated from that district across the Nile to Koba were removed to the location referred to. The deportation of the Sesse islanders was effected chiefly during June, July, and August, and 11,768 persons were removed to the mainland either by canoes or by the Government steamer. Some 2500 cattle, sheep, and goats were removed in addition. Later in the year 5820 persons were removed to the mainland from the Buvuma Islands, together with a large number of cattle, sheep, and goats. Thus, a total of 23,996 persons have been removed during the year from contact with the fly, and although it is to be feared that many of these persons are already infected, it is to be hoped that further infection among them will be either prevented or of quite exceptional occurrence. The local clearings at stations and on traffic routes have been maintained, and in many cases extended. The number of deaths from sleeping sickness in the Protectorate, so far as has been ascertained, were 3003 in 1905, 6522 in 1906, 4175 in 1907, 3662 in 1908, and 1782 in 1909. On the whole the results of the preventive measures must be regarded as highly satisfactory. The removal of the inhabitants from the banks of the Nile in Northern Unyoro and from the shores of Lake Albert in Western Unyoro has now been decided on.

TURPENTINE LOCALLY IN GONORRHŒA.

To the Editor of THE LANCET.

SIR,—Adverting to a note in THE LANCET of March 11th, p. 674, on a urethral ointment applicator of Mr. Andrew Charles, may I state that the local application of turpentine to the urethra by means of that instrument, or even by an ordinary catheter, has given very satisfactory results in cases of urethritis of a chronic kind, urethral chancroid, and specific urethritis. Many think that the beneficial effects of copaiba are due to its antiseptic action when excreted, since the direct action of pure turpentine locally may well be more potent. It is the only antiseptic which is practically painless applied to this region.

I am, Sir, yours faithfully,

Dublin. J. C. MCWALTER, F.R.F.P. & S. Glasg.

A CHINESE LADY DOCTOR.

Dr. Ya Mei Kin, who is said to be the first Chinese lady to obtain a medical diploma, addressed the annual general meeting of the Friends' Foreign Mission Association in London recently. Dr. Kin has worked along the lines of social reform in China, especially as regards opium-smoking and foot-binding.

TIDMAN'S SEA SALT.

Messrs. Tidman and Son, Limited, the proprietors of Tidman's sea salt, have received a confirmation of the fact not only that the salt is made from the sea, but that it contains the life-giving elements of sea-water. A letter from the Natural History Department of the British Museum at South Kensington states that specimens of a crustacean known as the brine shrimp (*Artemia*) have developed in a strong solution of Tidman's sea salt which had been kept for some time. "The occurrence of this animal is interesting," says the writer of the letter, "as I am not aware that it is now found in this country, although it was formerly abundant in the 'salt pans' in which sea-water was concentrated for the manufacture of salt."

A CASE OF LEPROSY.

Is any institution, a correspondent asks, willing to take a case of leprosy, and if so upon what terms?

Hydrarg.—Our advice in similar circumstances is always to avoid even the appearance of poaching on the debarred area. Only a lawyer with the actual words of the bond before him could give our correspondent advice on the strictly legal aspect of his own case.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for April, 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
April 9th–13th (Paris).—Society of French Anatomists.
" 18th–20th (Paris).—Third Congress of Physiotherapy of French-speaking Physicians.
" 18th–28th (Tunis).—Exhibition of Hygiene.
" 18th (Berlin).—Tenth Congress of the German Orthopædic Surgery Society.
" 19th–22nd (Berlin).—German Surgical Congress. (Fortieth Annual Meeting.)
" 19th–22nd (Wiesbaden).—Twenty-eighth German Congress of Internal Medicine.
" 20th–22nd (Groningen).—Thirteenth Nature and Medical Congress.
" 22nd–May 6th (London, Olympia).—Building Exhibition.
" 29th–Oct. 26th (Turin).—International Exhibition.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

Papers:
Professor W. E. Dixon, F.R.S.: Section and Stimulation of the Bundle of His.
Dr. J. Gordon Sharp: Ergot from the Therapeutical Side.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Dr. F. J. Palmer: Traumatic Neuroses and Psychoses and their Medico-Legal Considerations.—Dr. P. Weber: A Case of Late Hodgkin's Disease with Remarks on various Cases presenting the Clinical Picture of Splenic Anæmia (Banti's Disease).—Dr. C. W. Chapman: Notes on a Case of Pigmentary Syphilide in a Patient with Heart Disease.

SOCIETY FOR THE STUDY OF INEBRIETY, Rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W.

TUESDAY.—4 P.M., Appointment of Officers and Council for the ensuing Session. The President: Short Address. Discussion on Alcohol and Insanity (opened by Prof. F. W. Mott).

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Annual Discussion on Colitis (opened by Dr. N. Pitt). Dr. Sandwith: The Relation of Dysentery to Colitis; Mr. L. Mummery: The Varieties of Colitis and their Diagnosis by Sigmoidoscopic Examination.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. A. Latham: The Treatment of Pneumonia.
TUESDAY.—4 P.M., Dr. F. W. Price: Clinique (Medical). 5.15 P.M., Lecture:—Mr. A. W. M. Robson: The Treatment of Chronic Jaundice.
WEDNESDAY.—4 P.M., Mr. L. H. McGavin: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. F. W. Tunnicliffe: The Rationale of Clothing.
THURSDAY.—4 P.M., Mr. J. Cantlie: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. F. L. Golla: Disturbances of Ocular Movements in Diseases of the Nervous System.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.
THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham): Nose, Throat, and Ear (Mr. H. W. Carson). 3 P.M., Dr. F. Thomson: Demonstration of Cases of Infectious Fevers at the North-Eastern Fever Hospital, St. Anne's-road, N.

TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting).

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (15th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 5th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Mar. 30	29·67	N.E.	...	57	49	41	42	42	Overcast
,, 31	29·80	S.W.	...	70	57	42	47	47	Overcast
April 1	29·97	N.E.	...	77	53	44	44	46	Overcast
,, 2	29·99	N.	0·30	47	43	40	39	41	Raining
,, 3	30·06	N.E.	0·44	97	46	40	38	40	Cloudy
,, 4	30·22	N.	...	89	44	33	35	37	Cloudy
,, 5	30·10	N.E.	0·03	89	37	31	30	32	Cloudy

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